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THE FAR EASTERN REVIEW

VOL. VI. MANILA, SHANGHAI AND YOKOHAMA, DECEMBER, 1909. No. 7.



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Governor General of the Philippine Islands

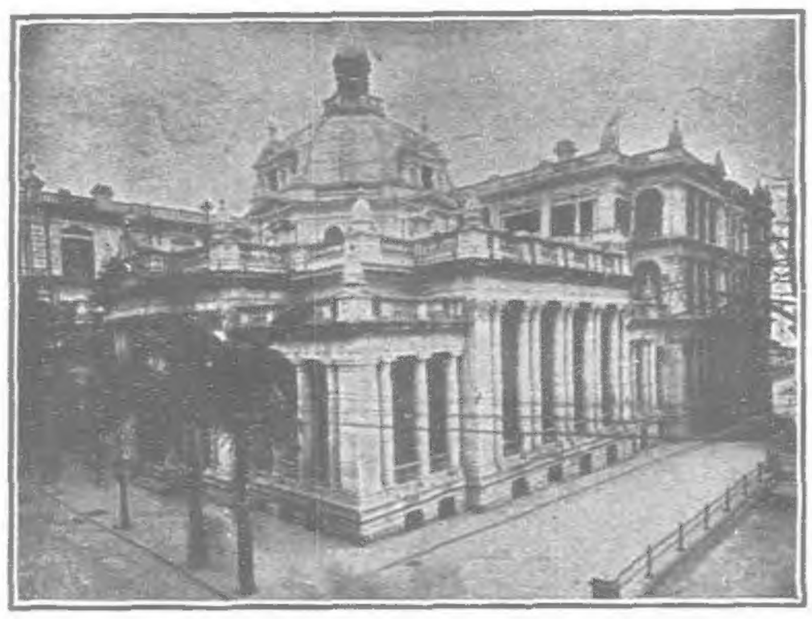
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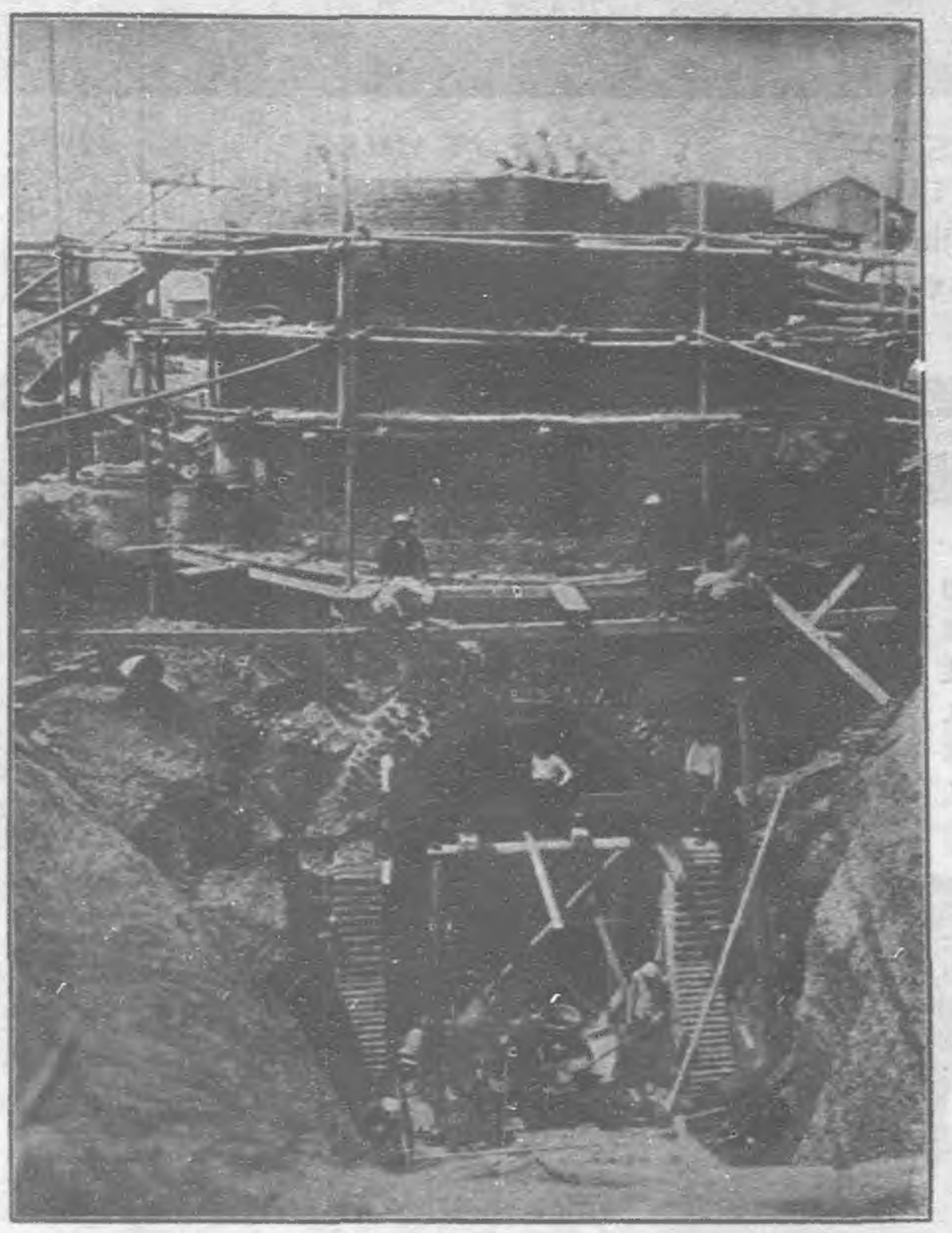
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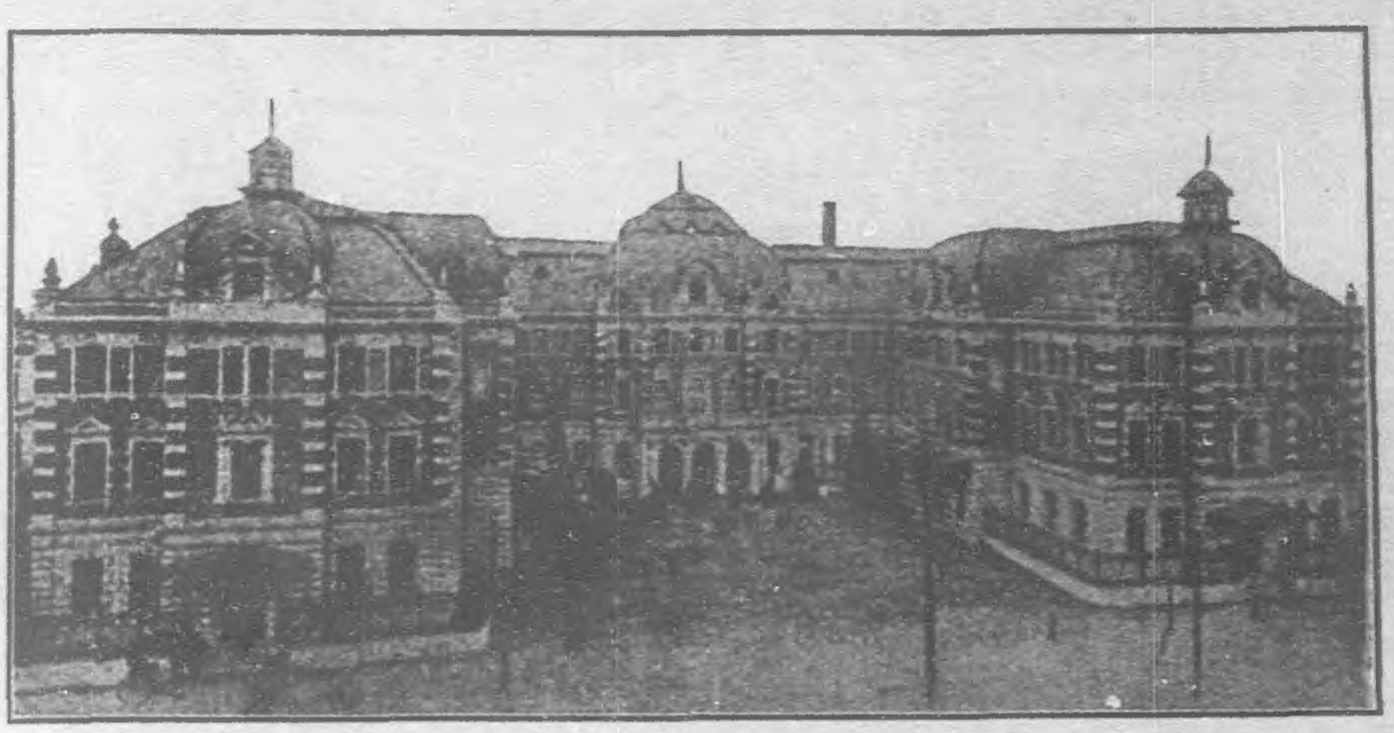
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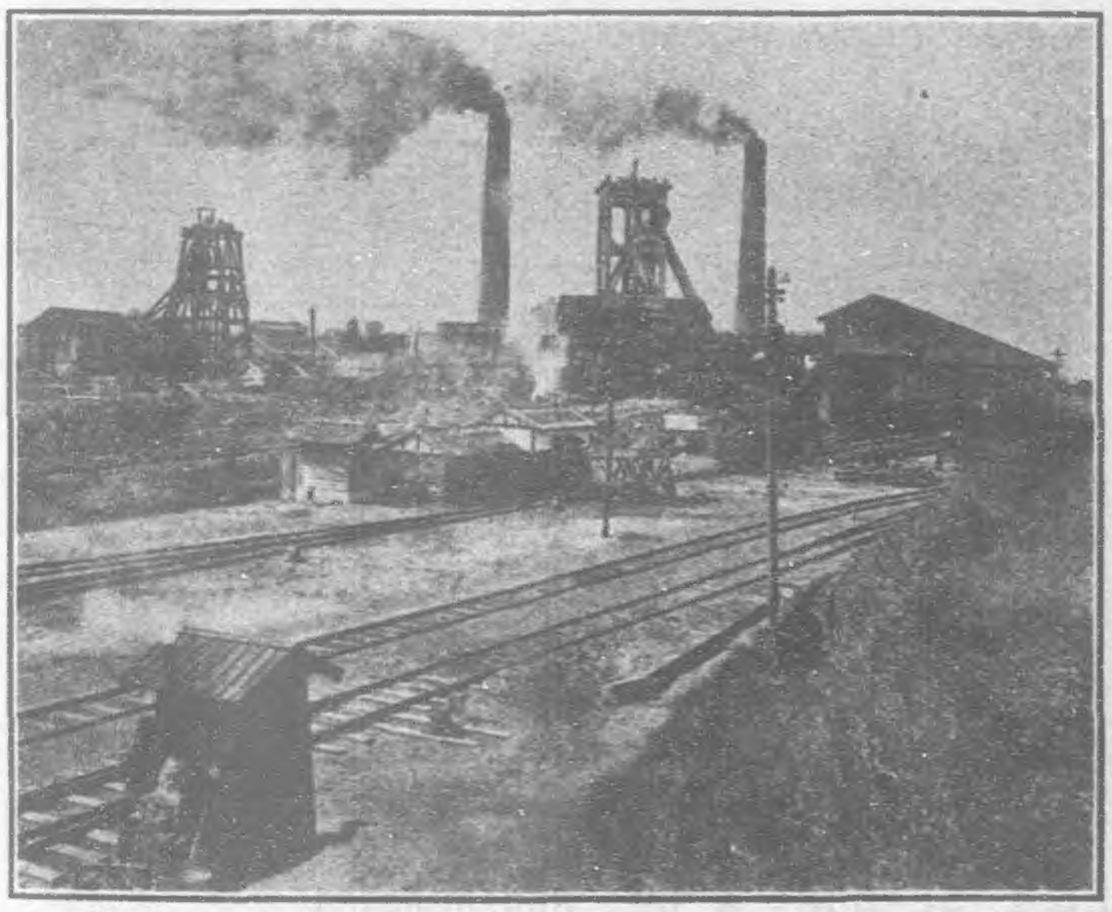
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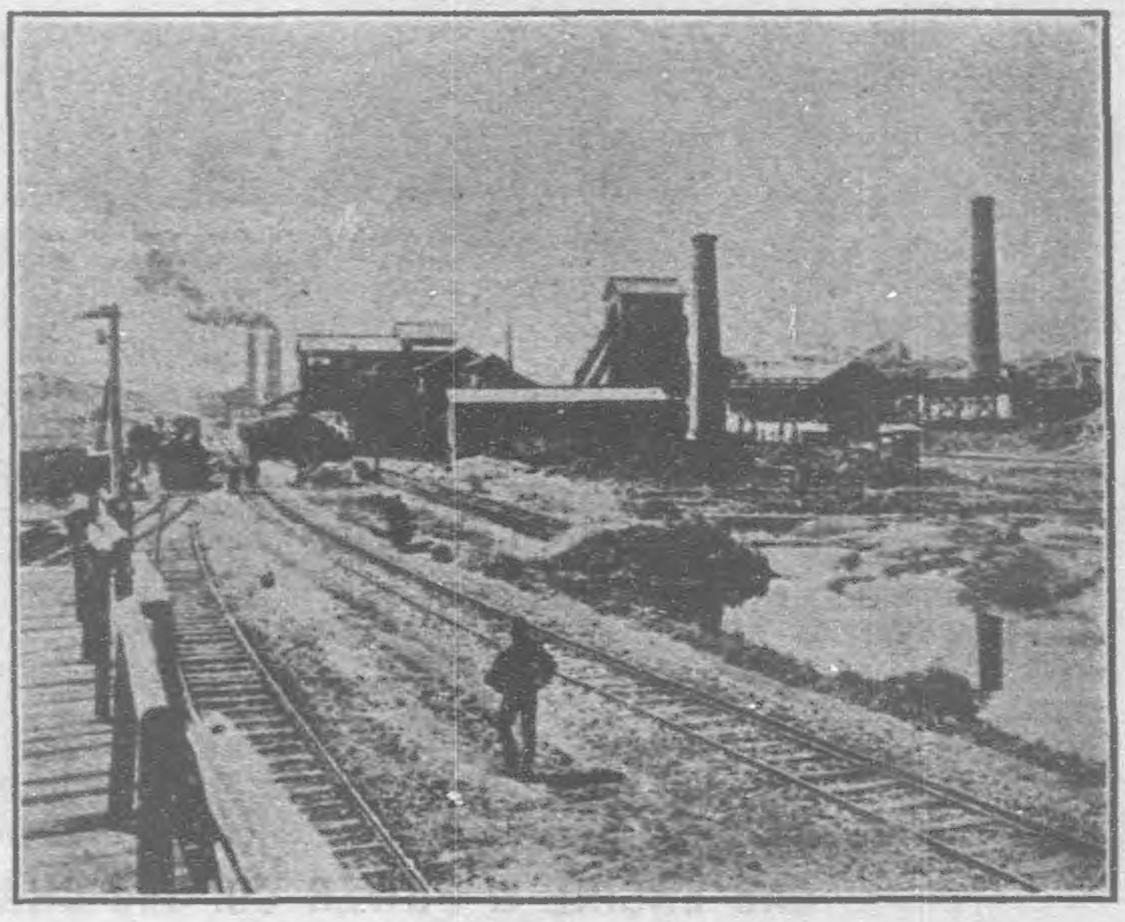
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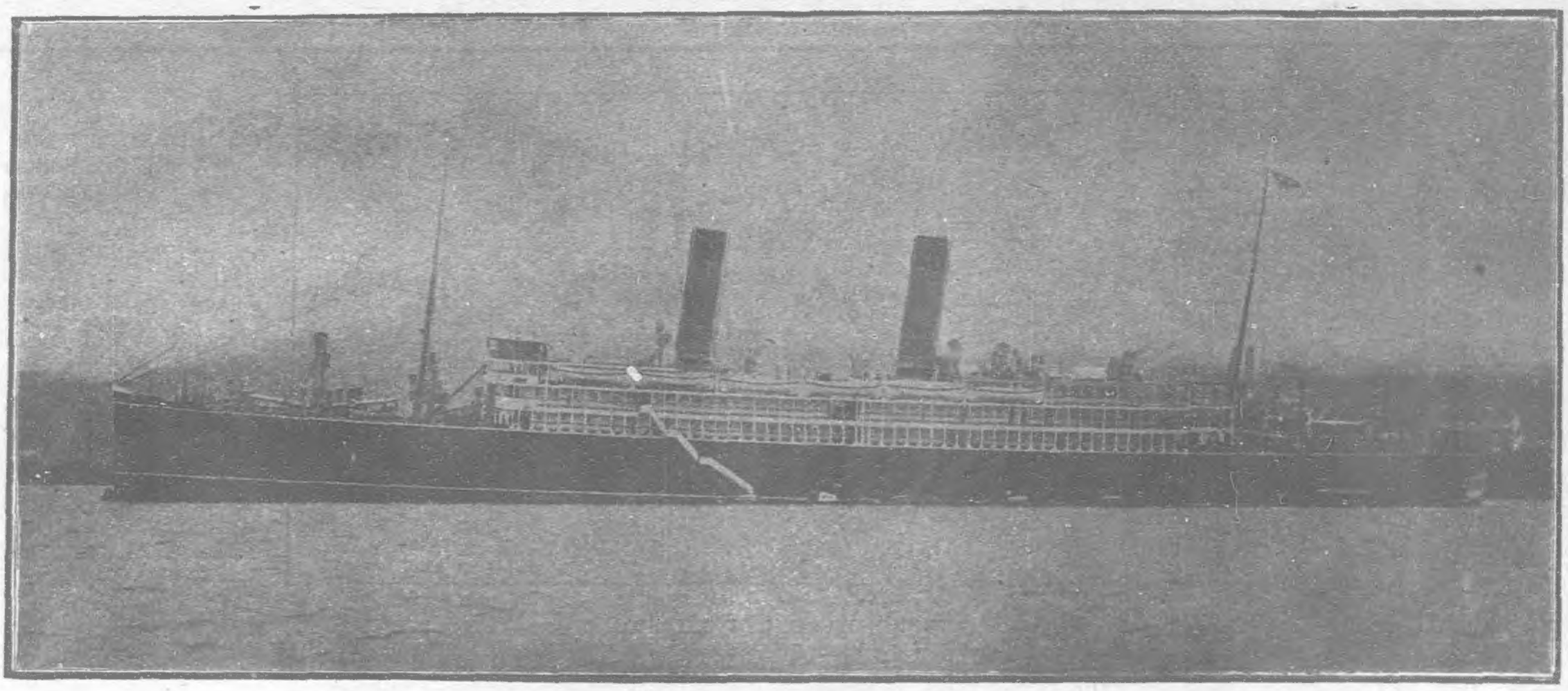
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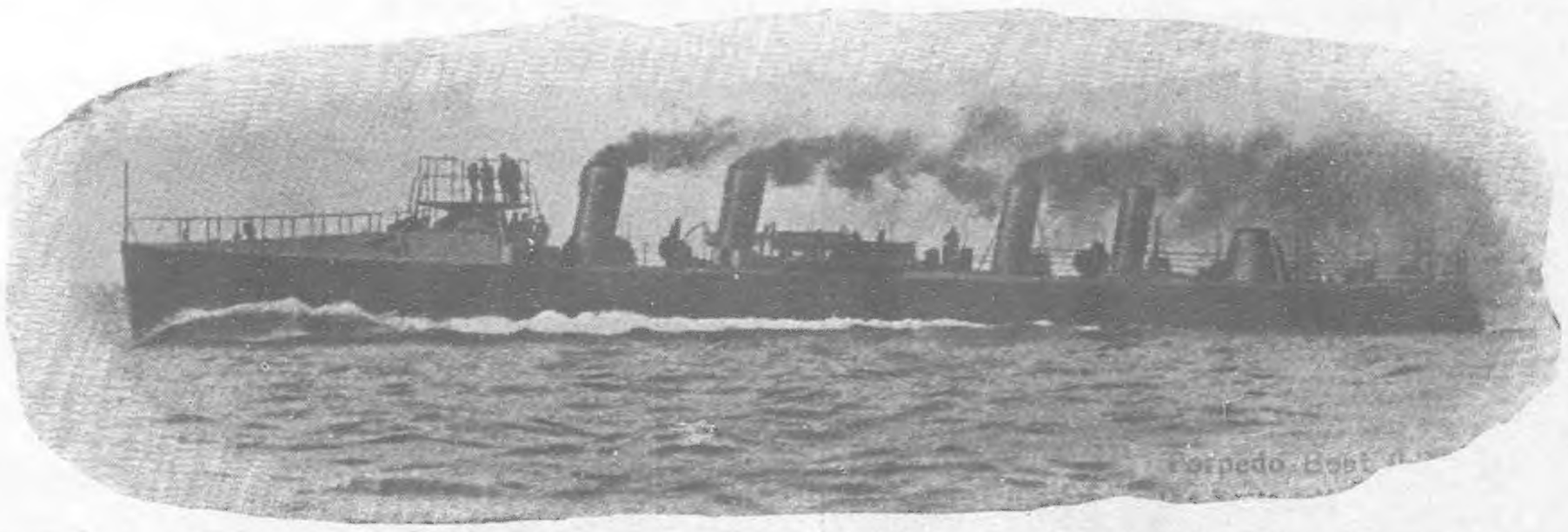
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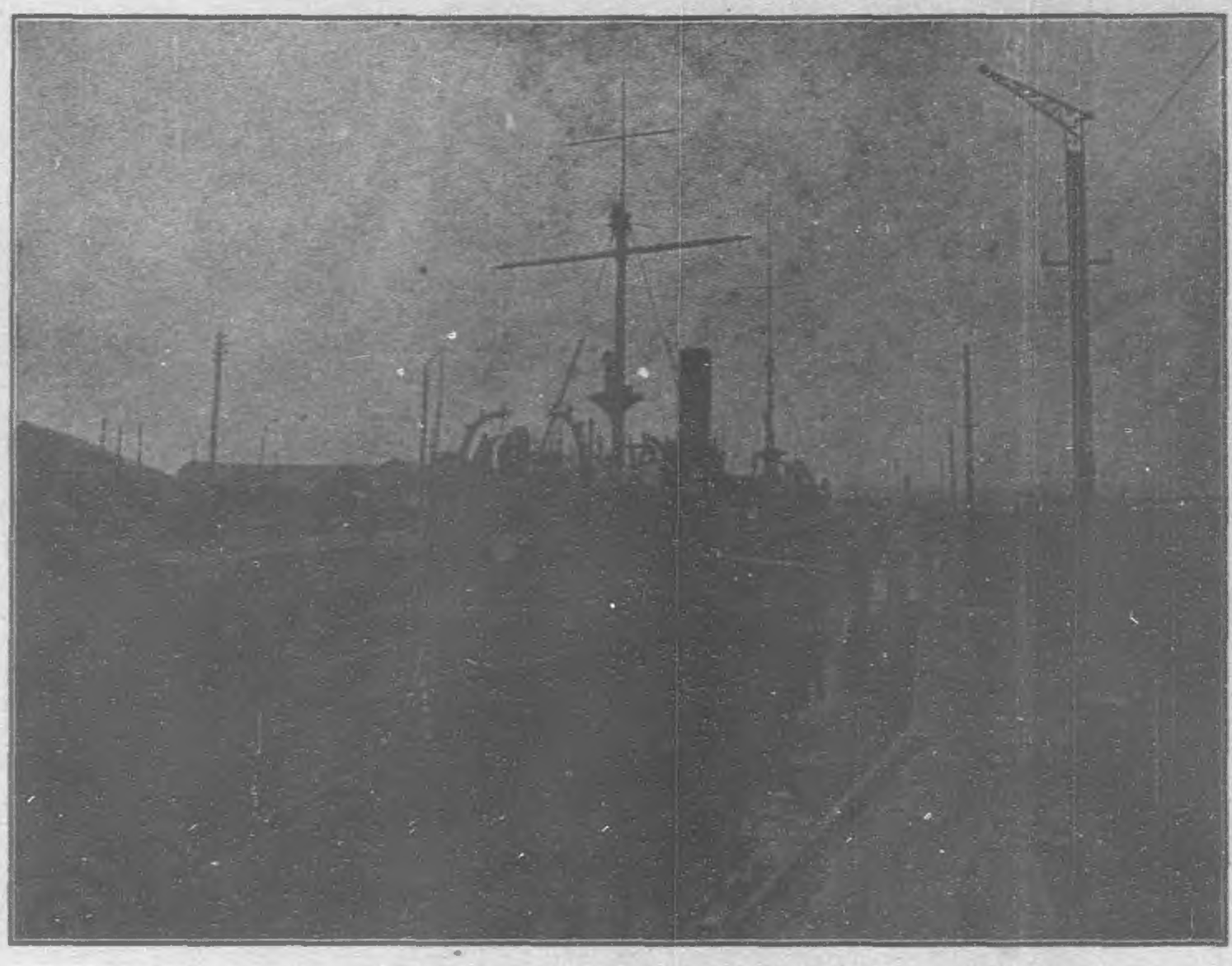
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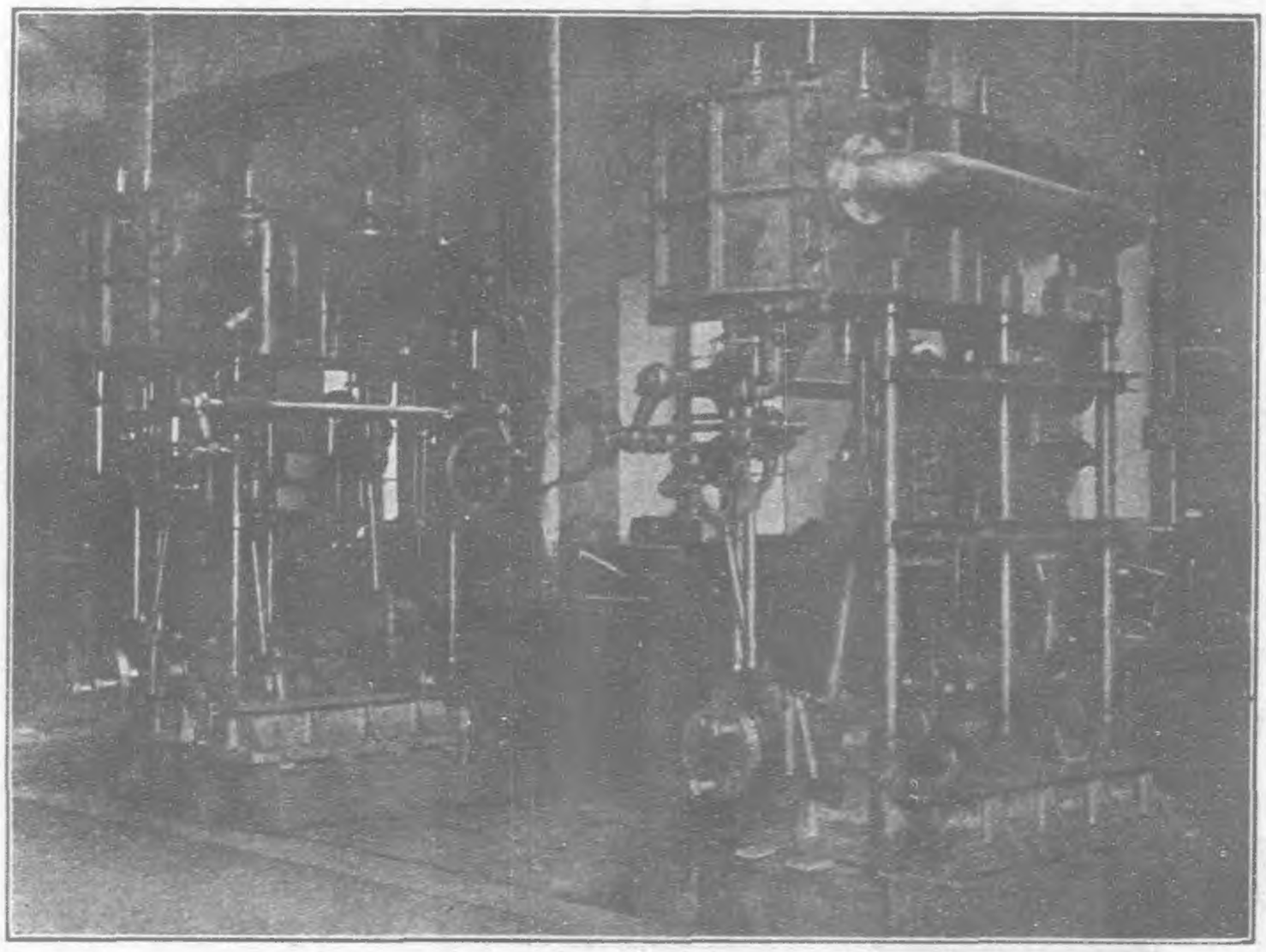
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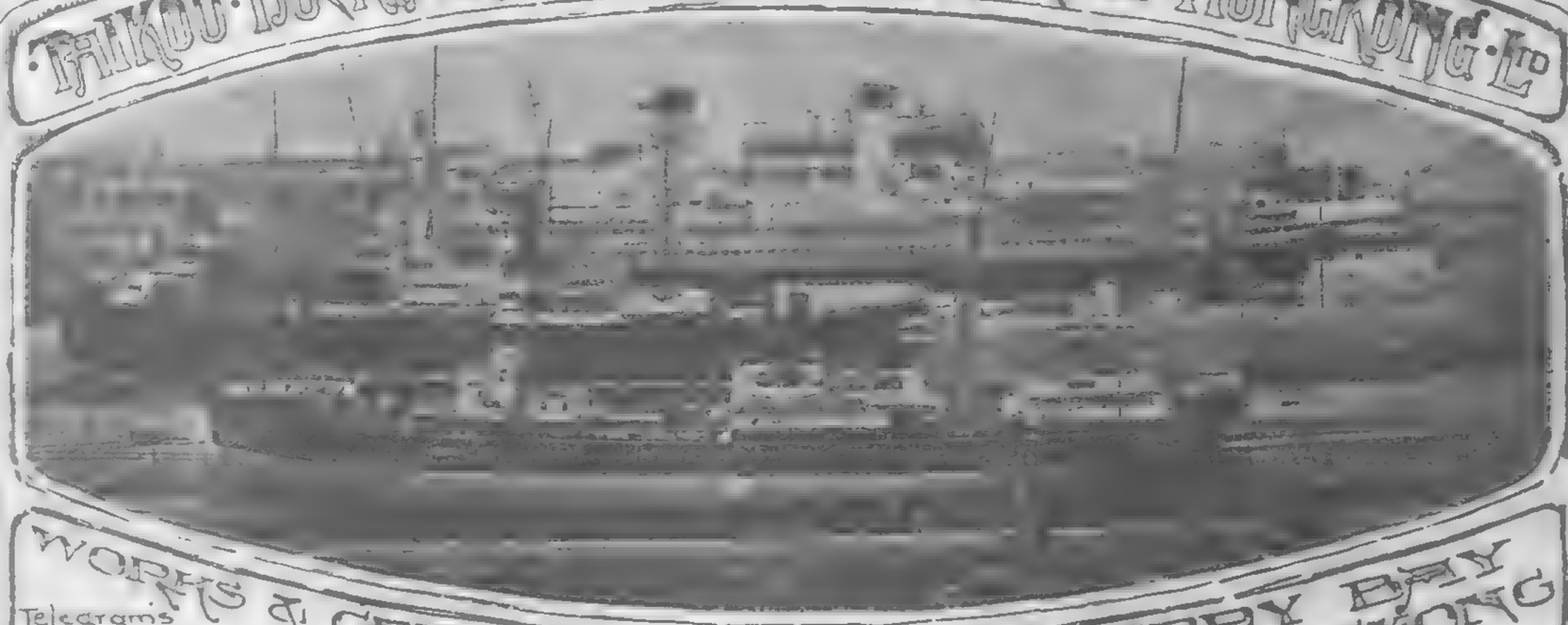
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No. 3 Dock, Kowloon	264	49′ 3″	14′	7′ 6″	—
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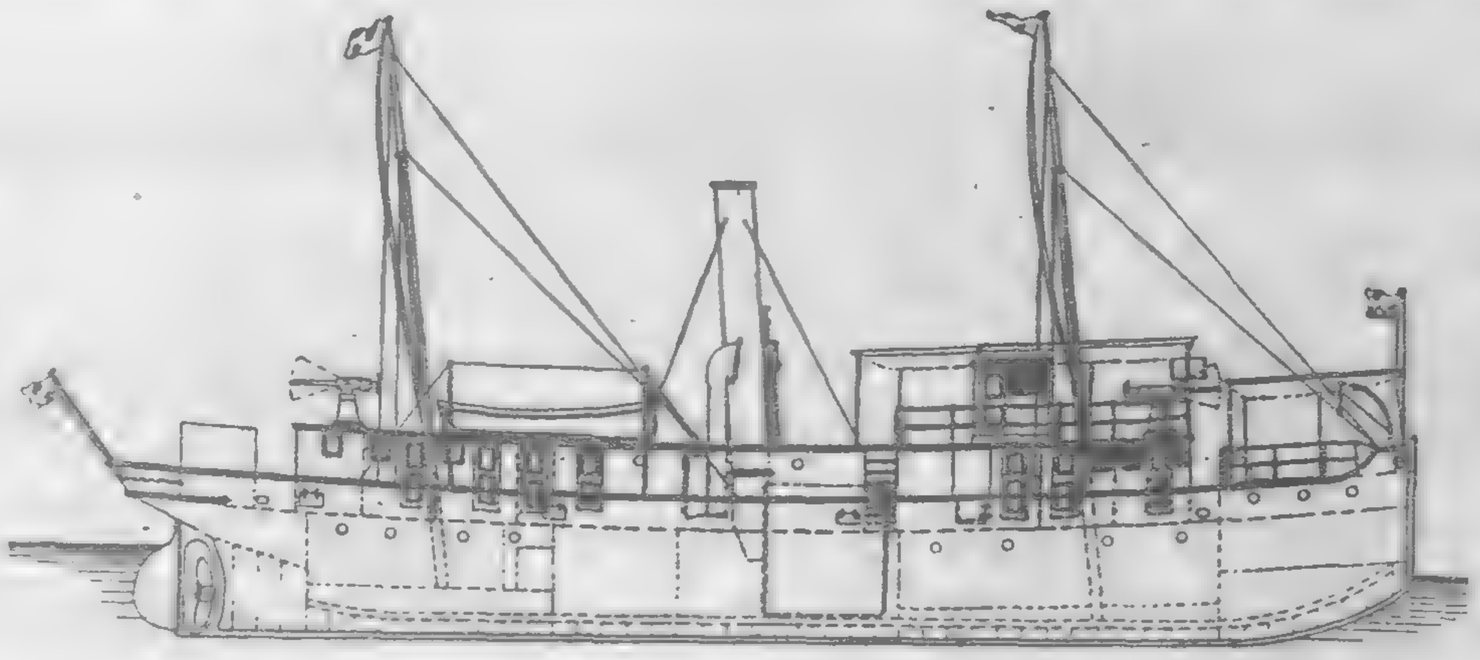
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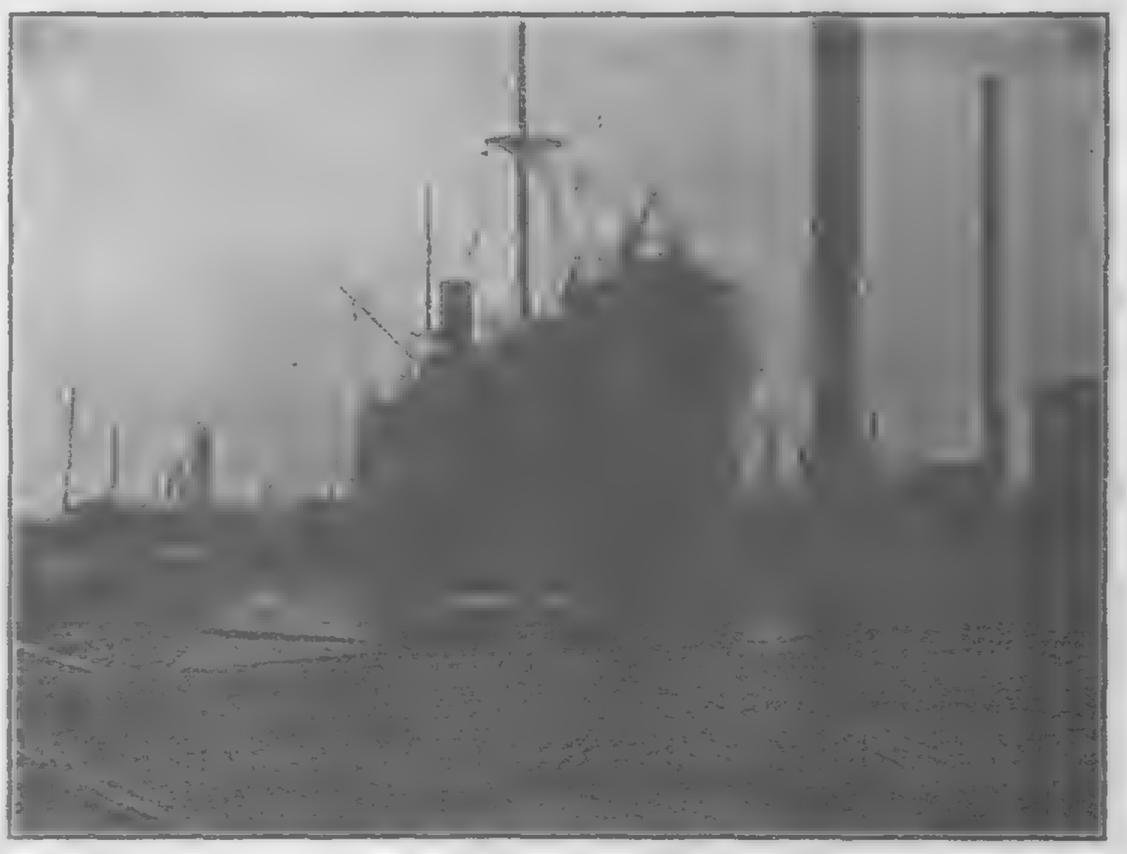
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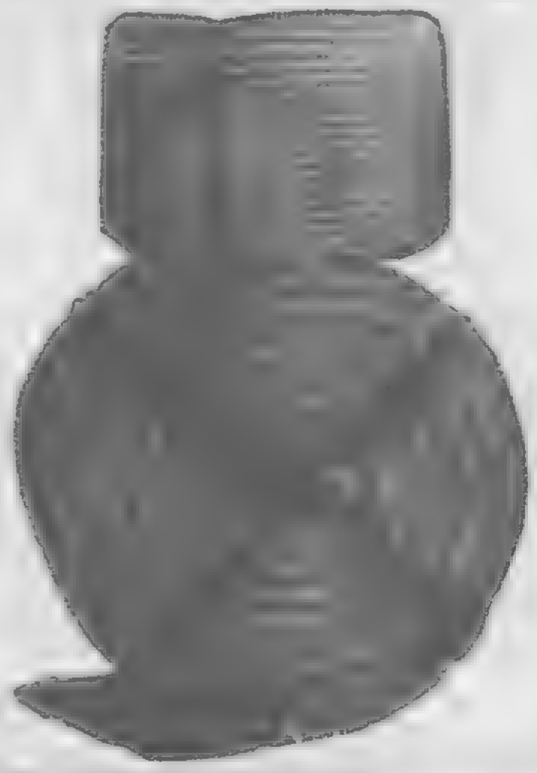
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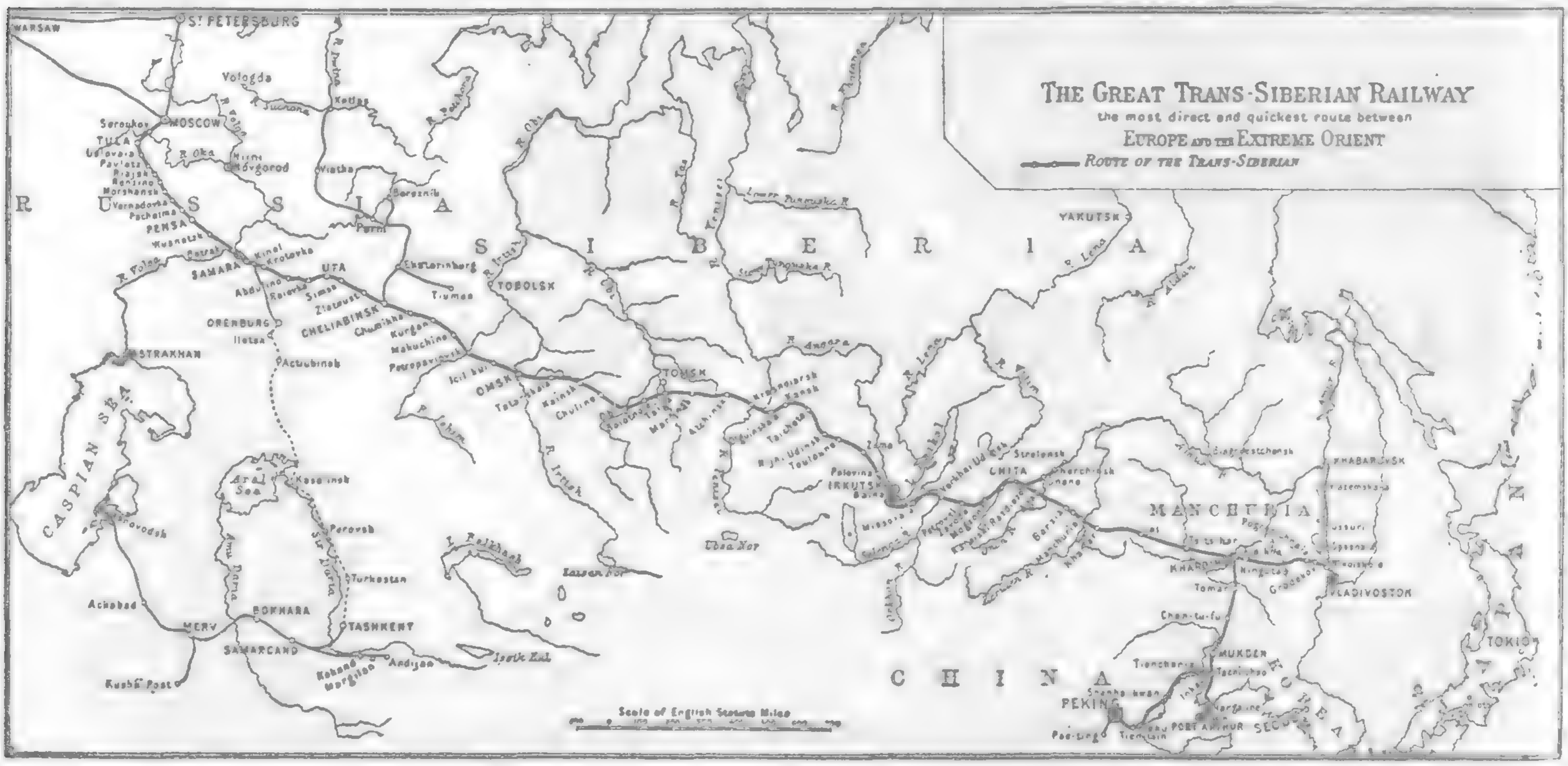
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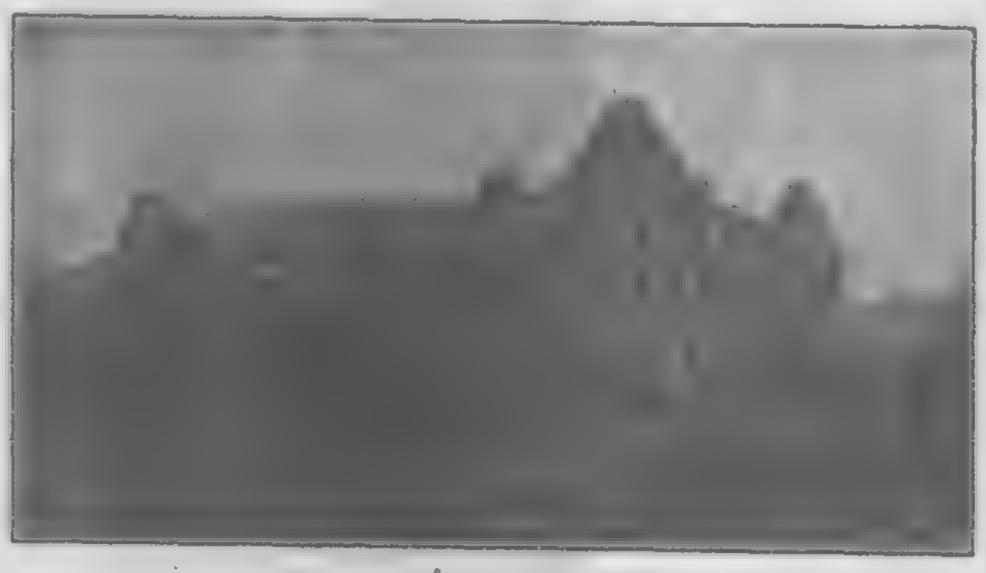
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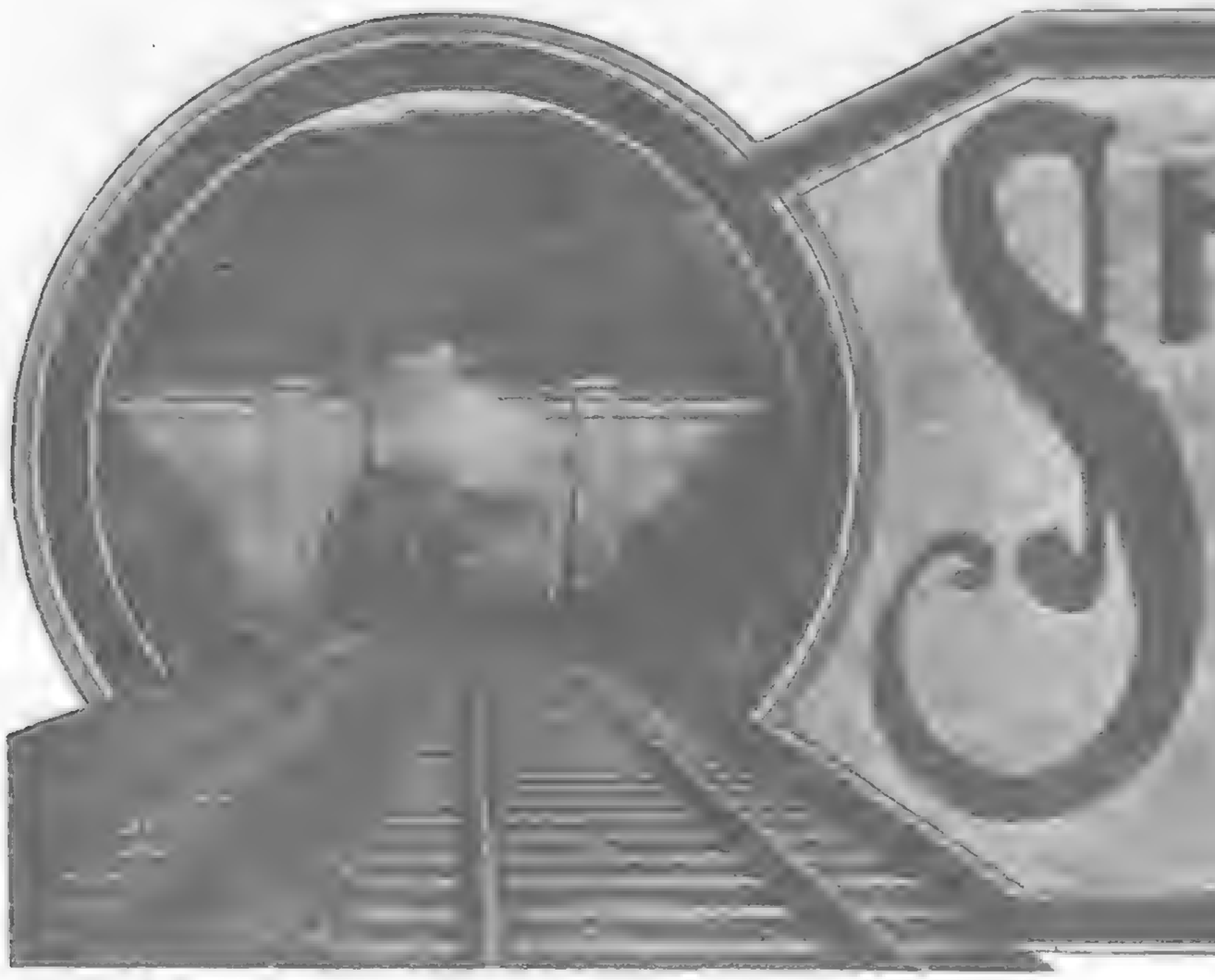
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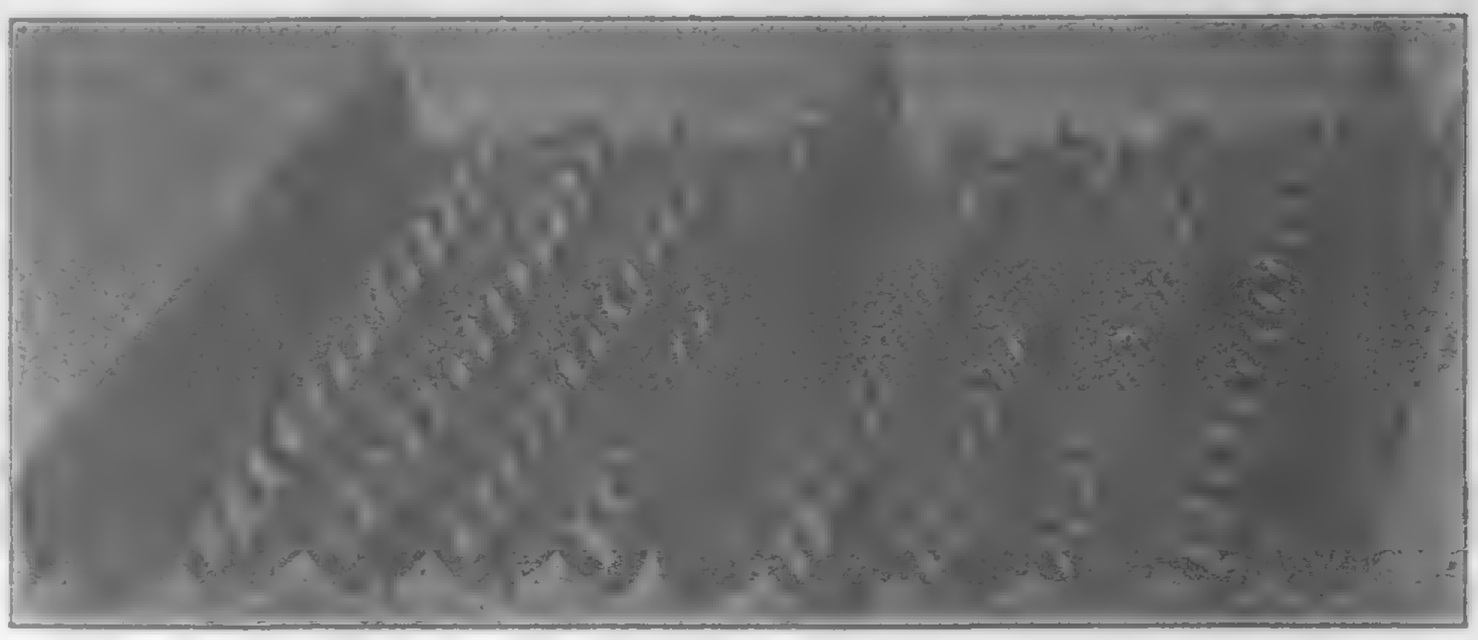
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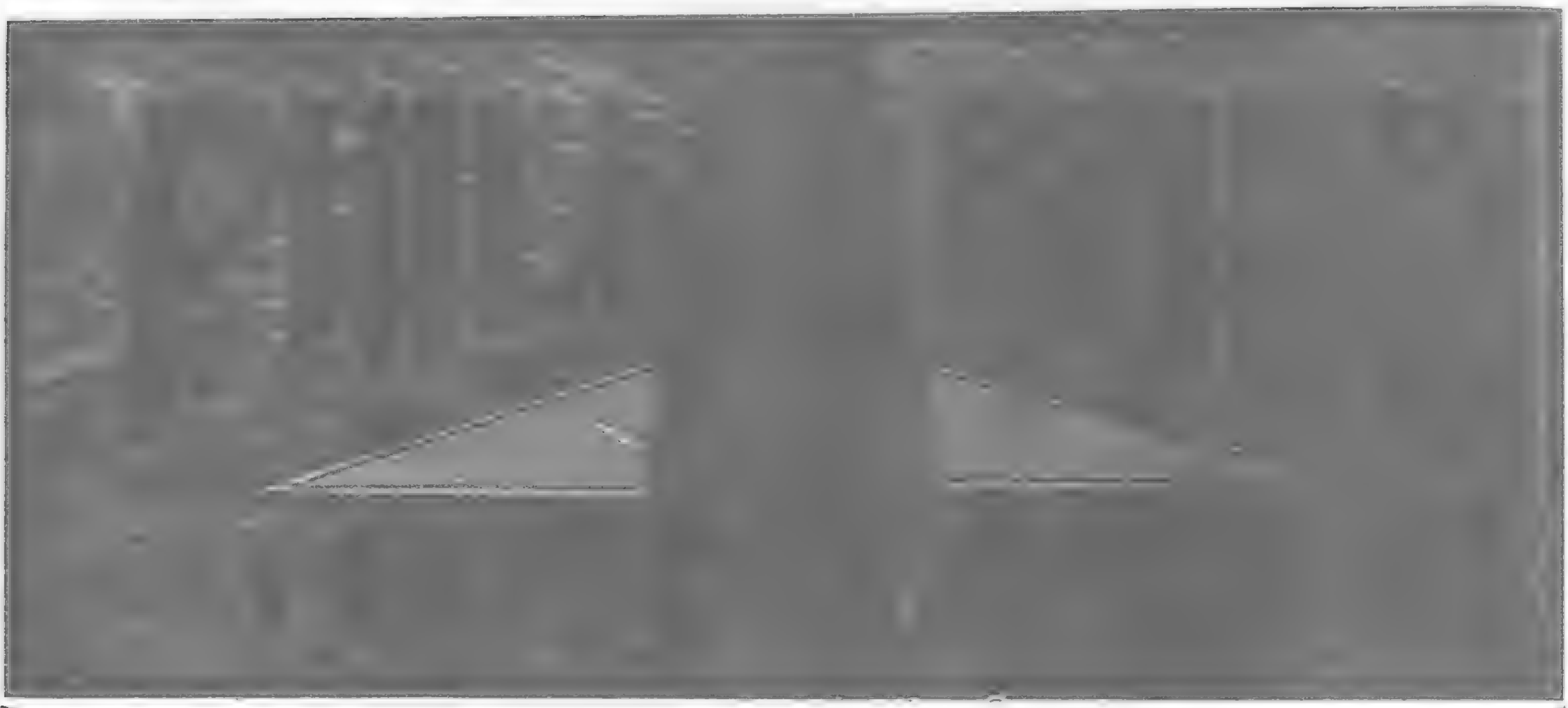
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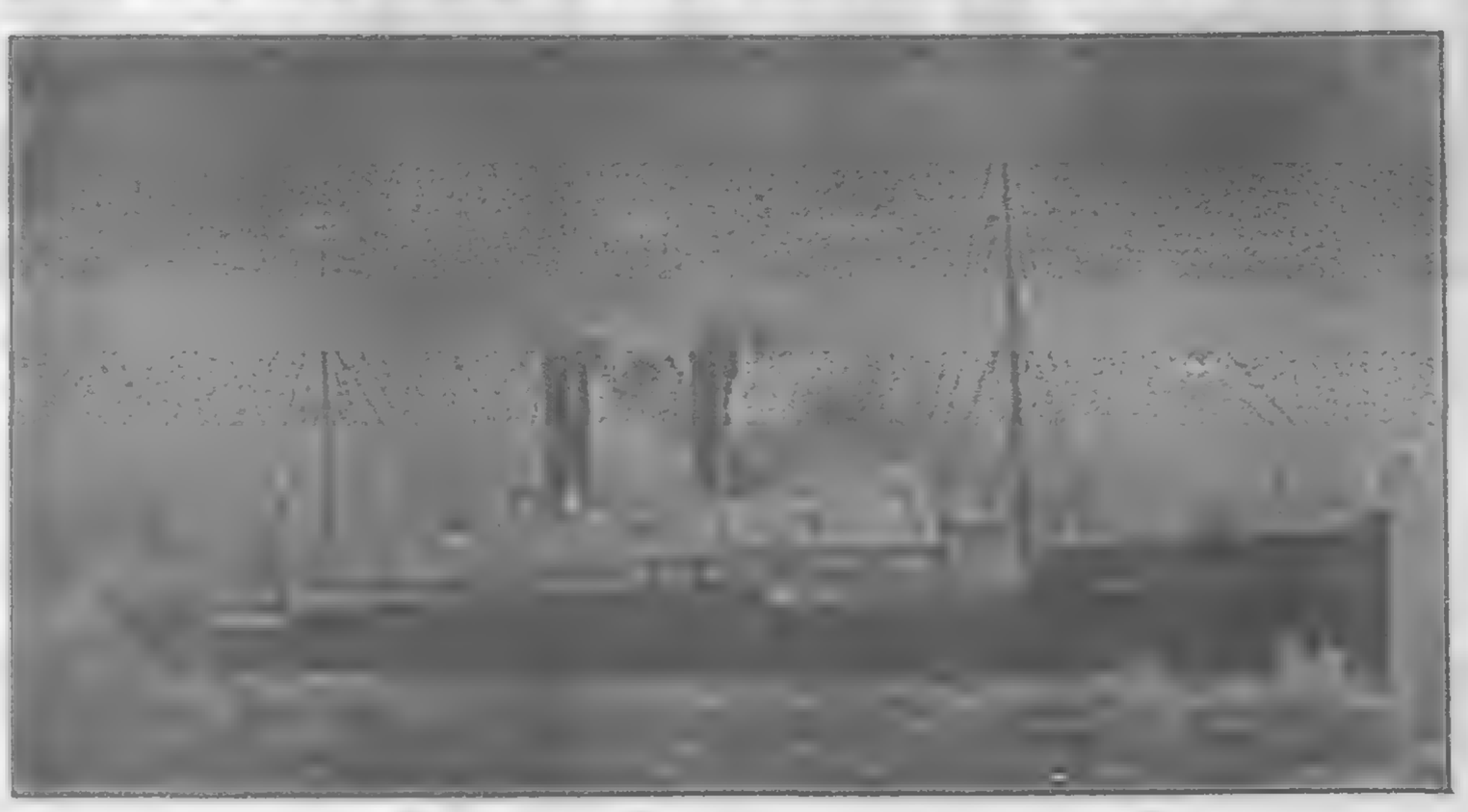
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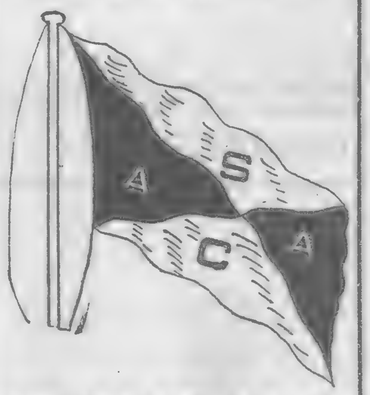
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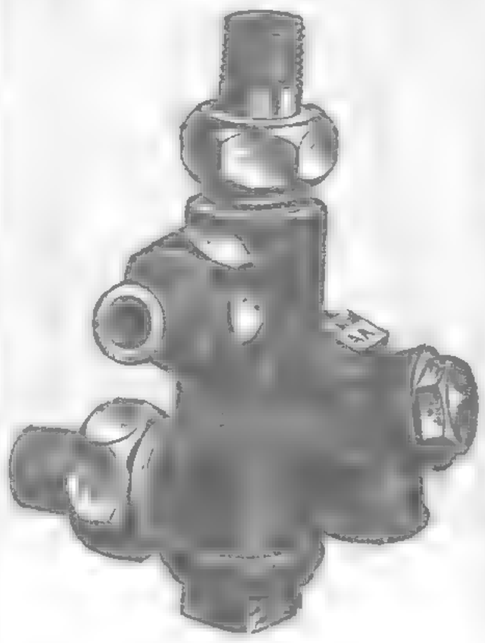
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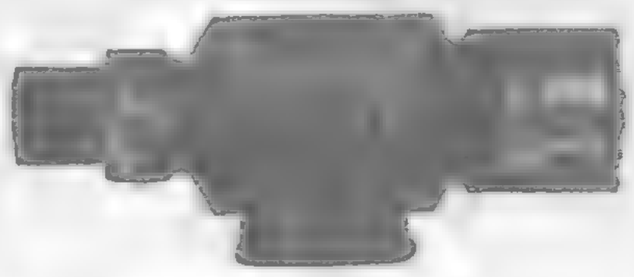
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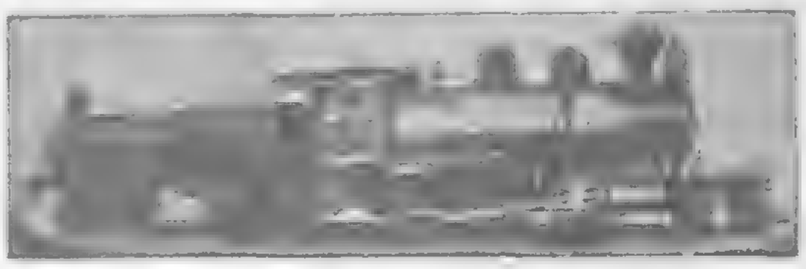
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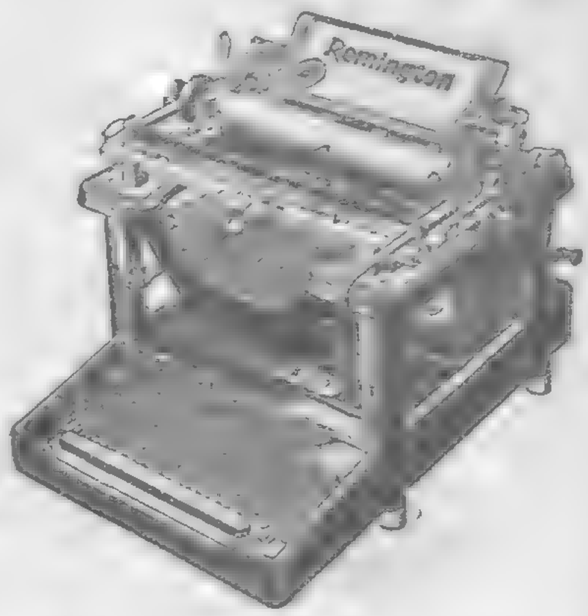
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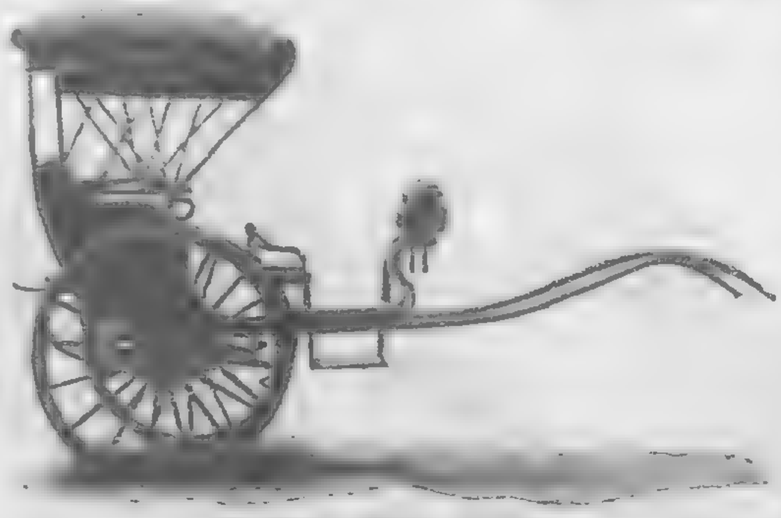
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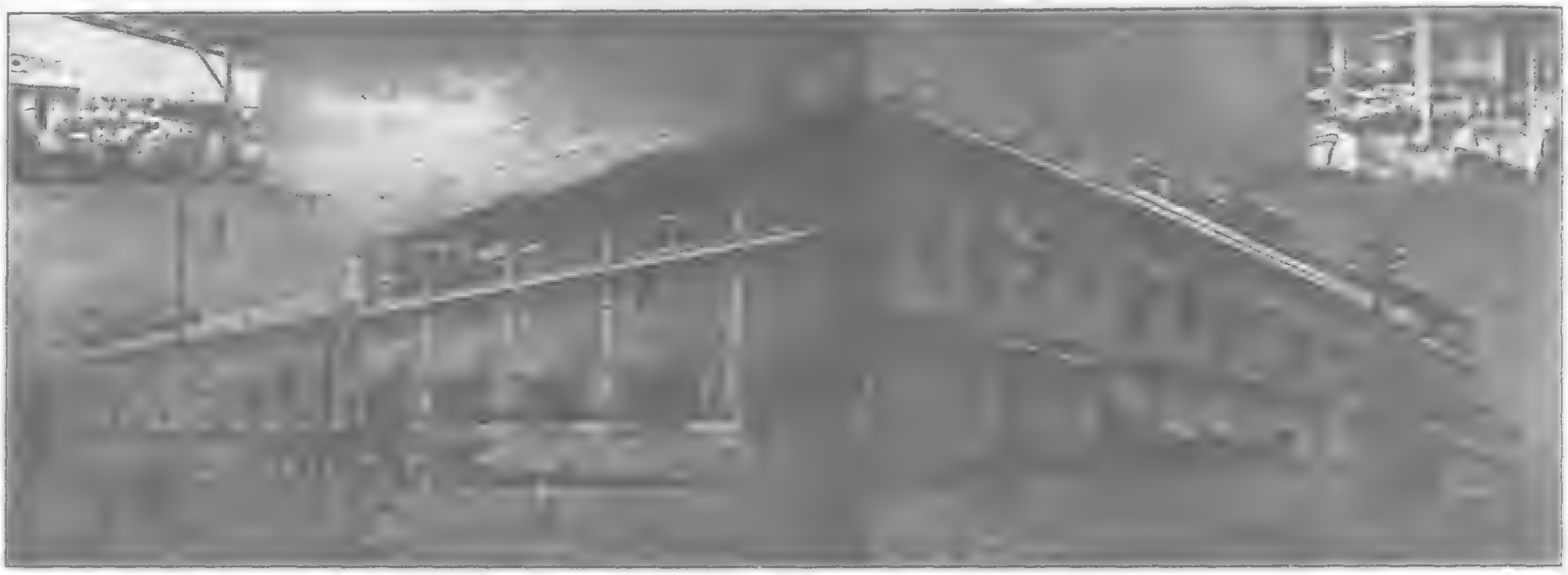
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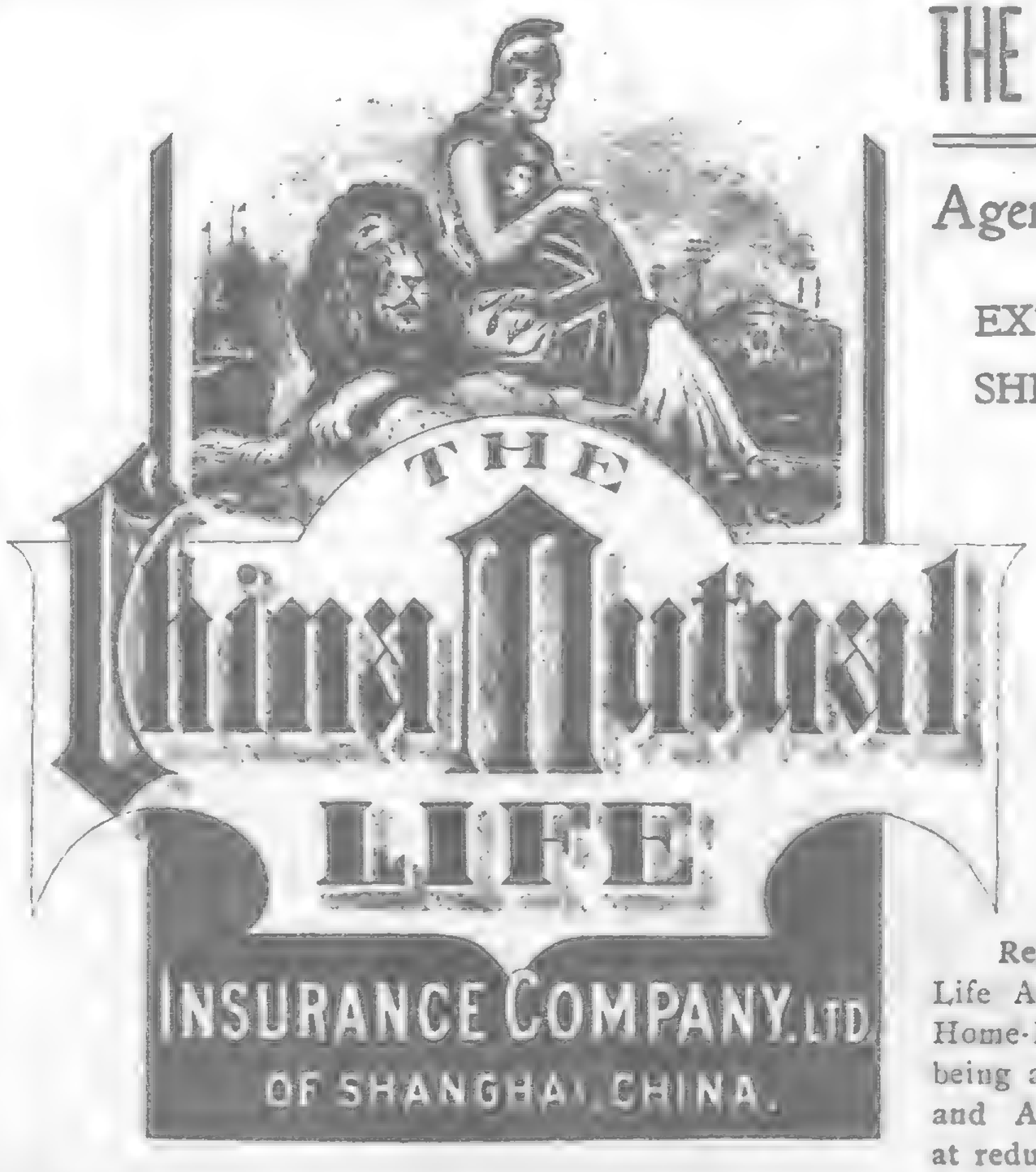
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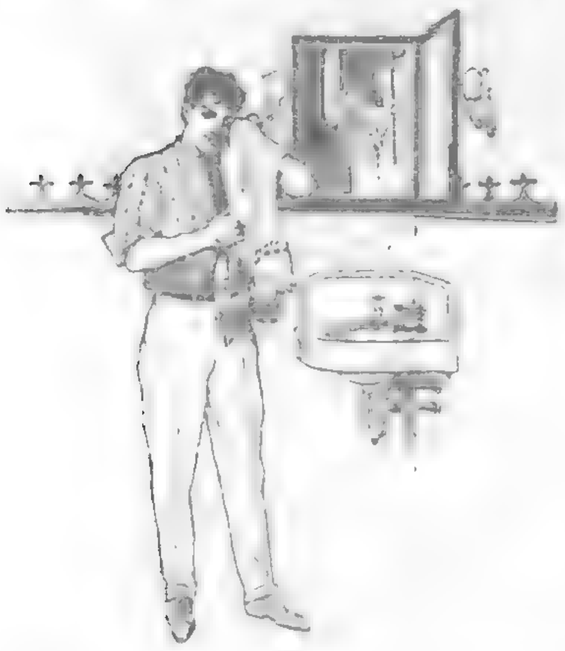
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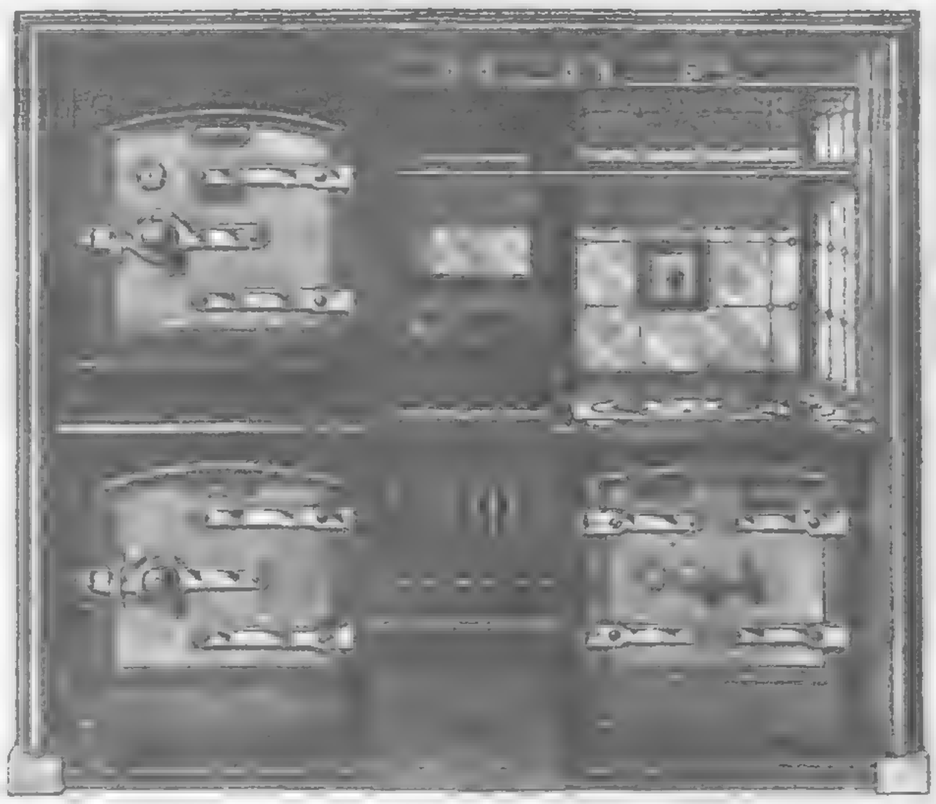
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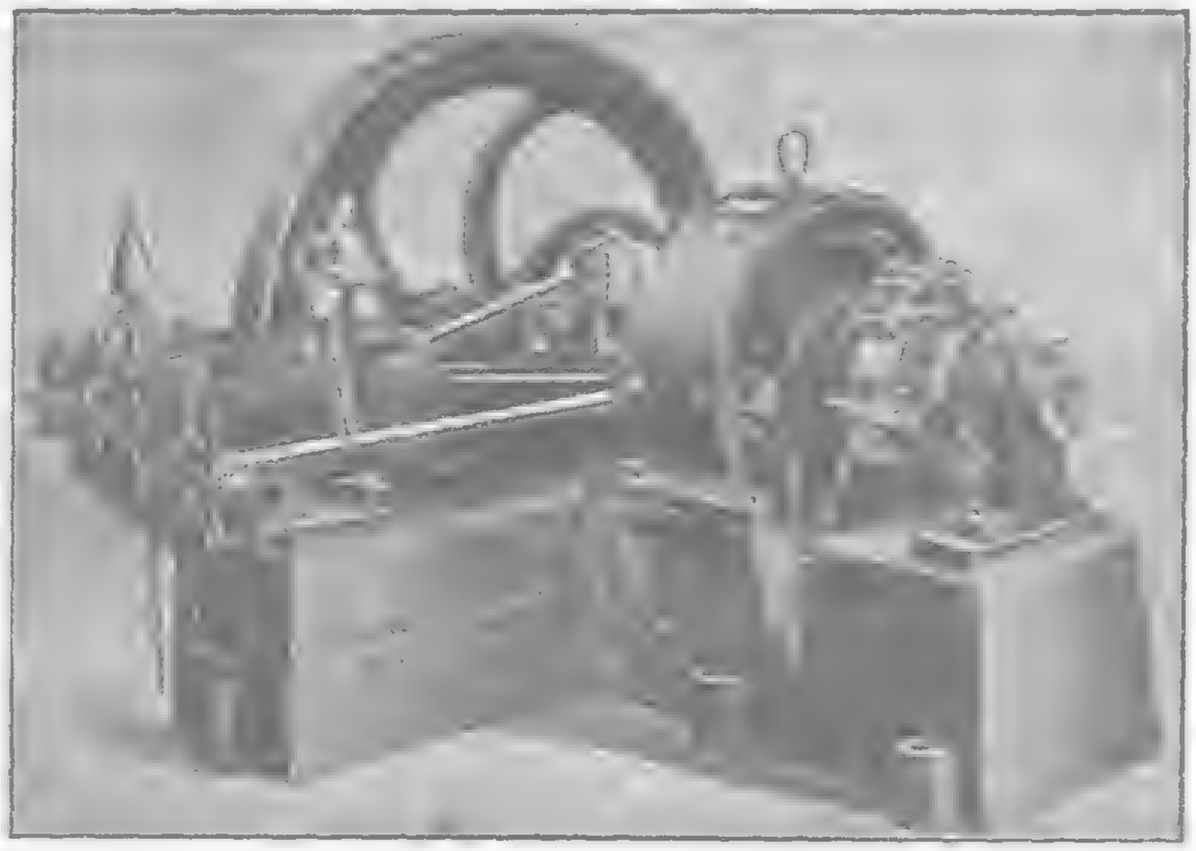
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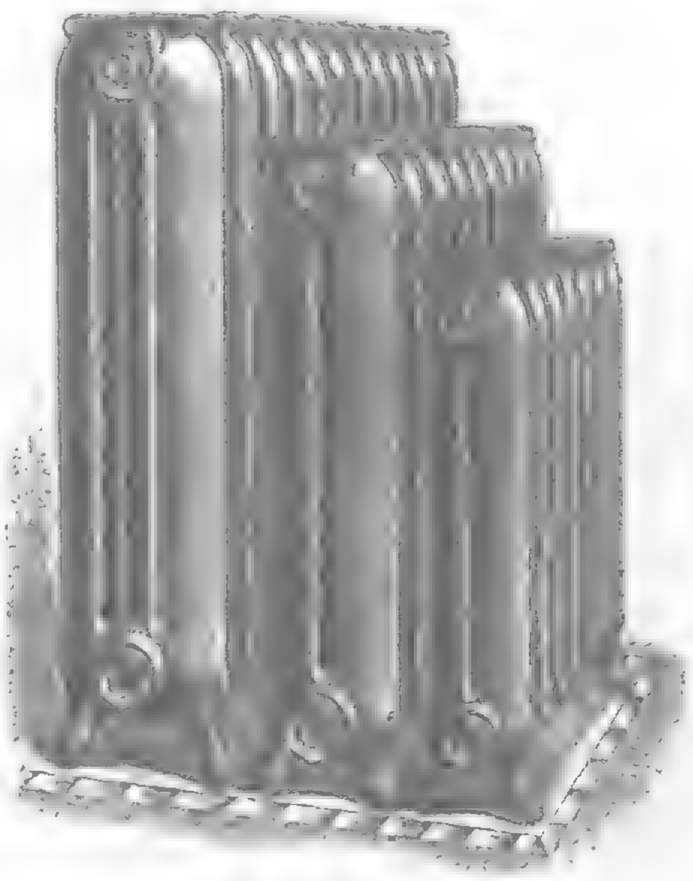
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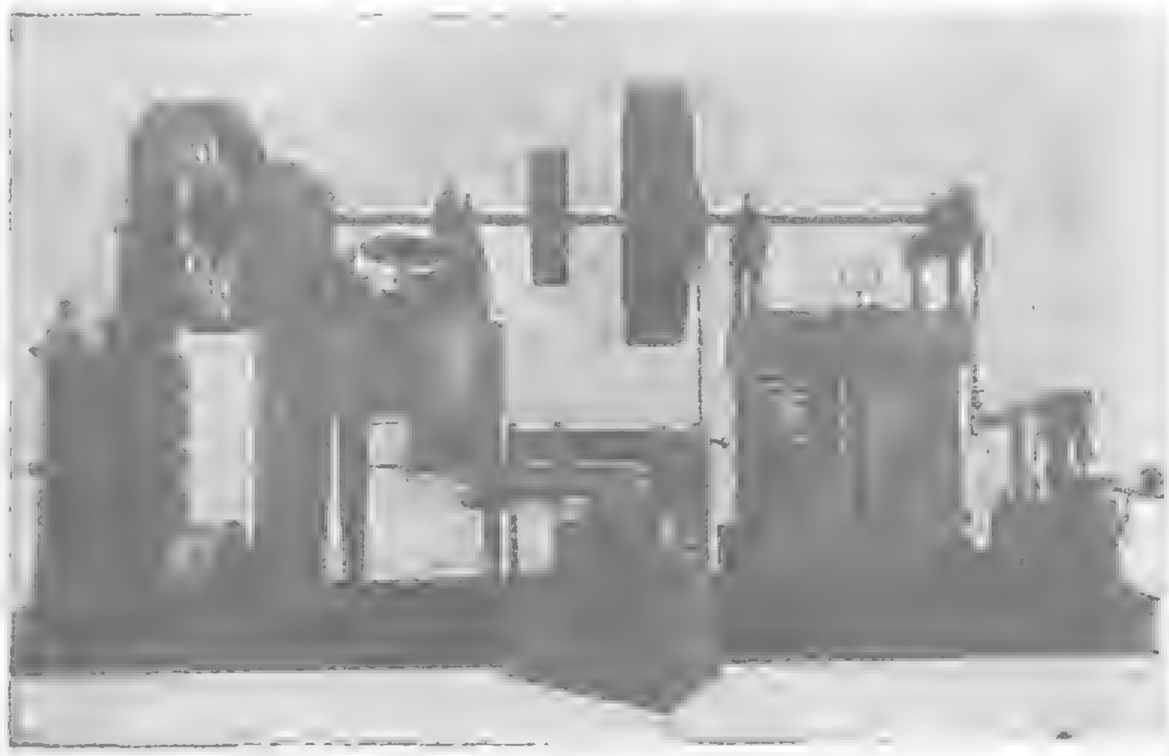
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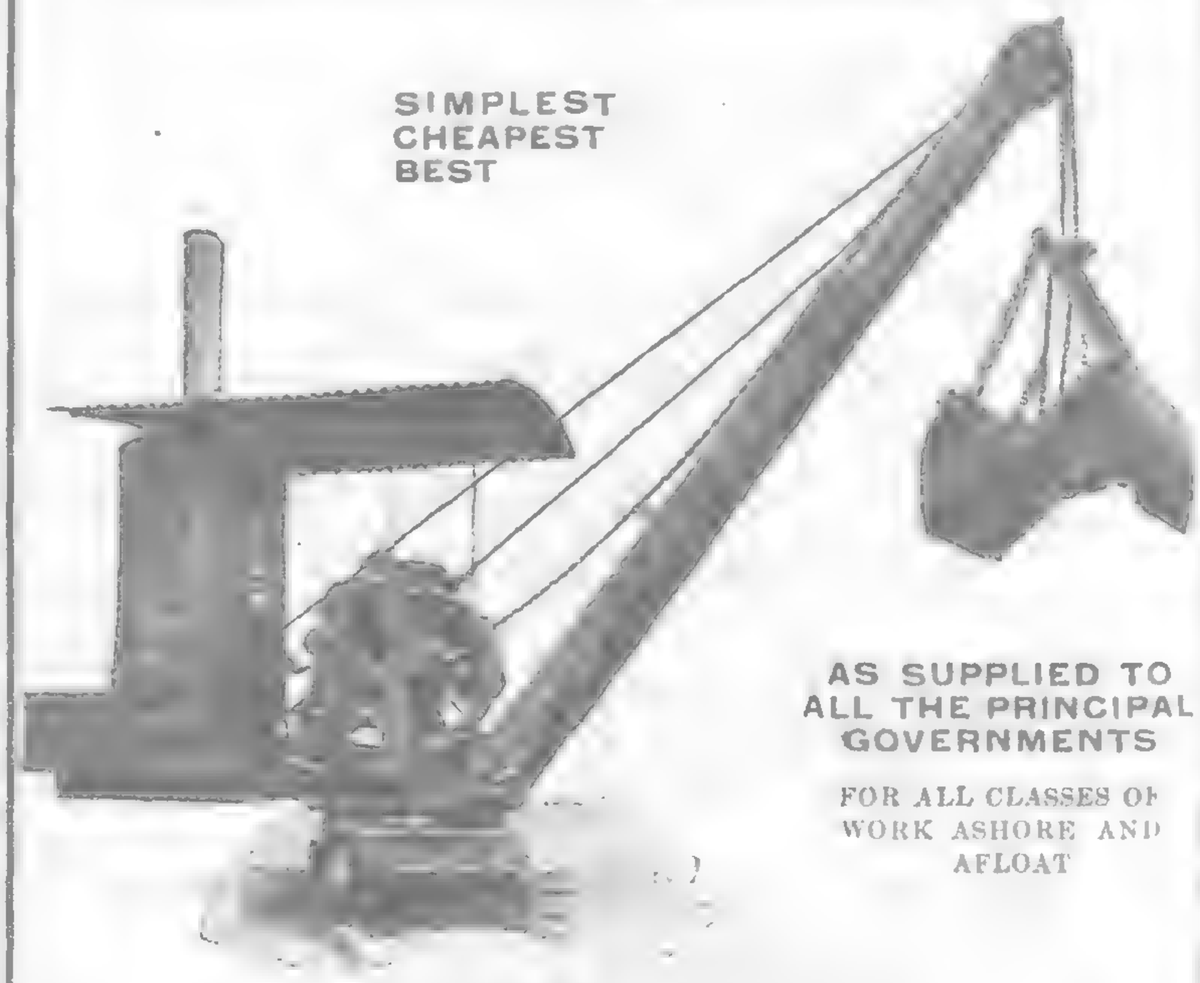
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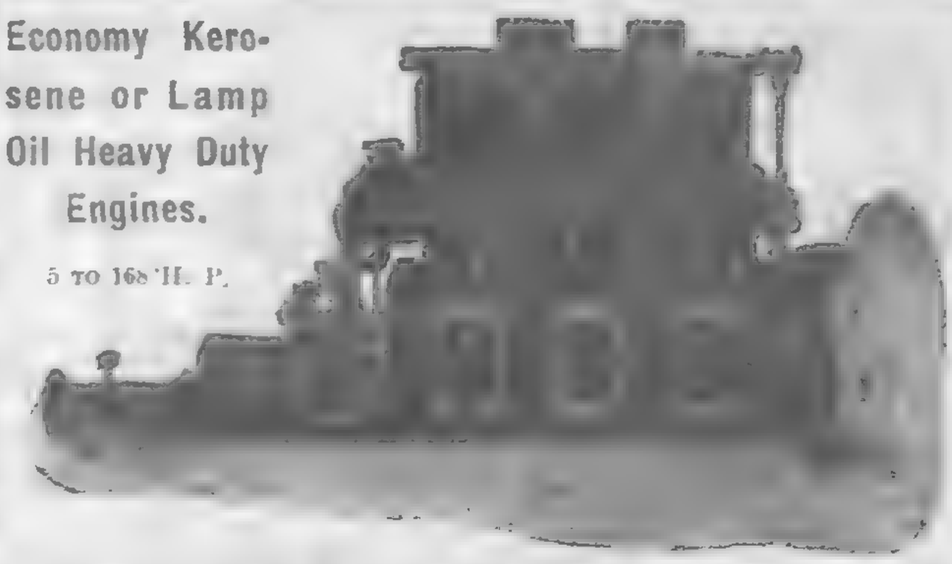
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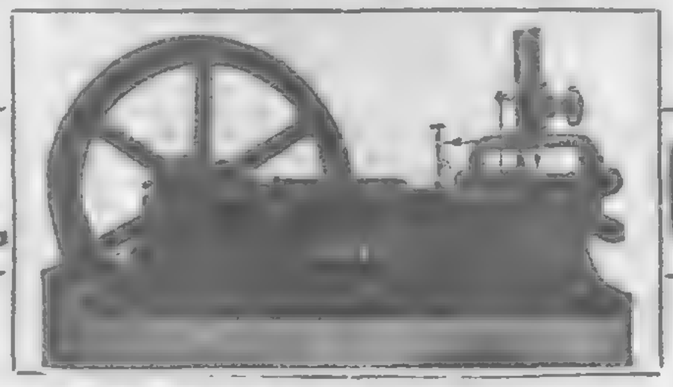
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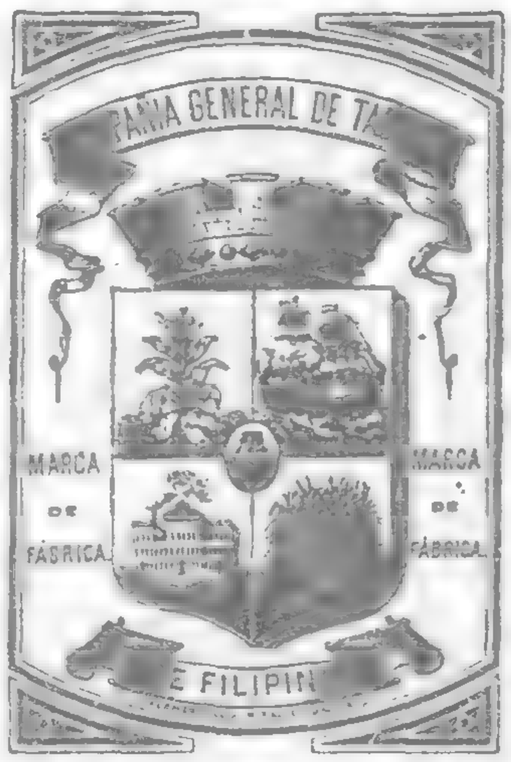
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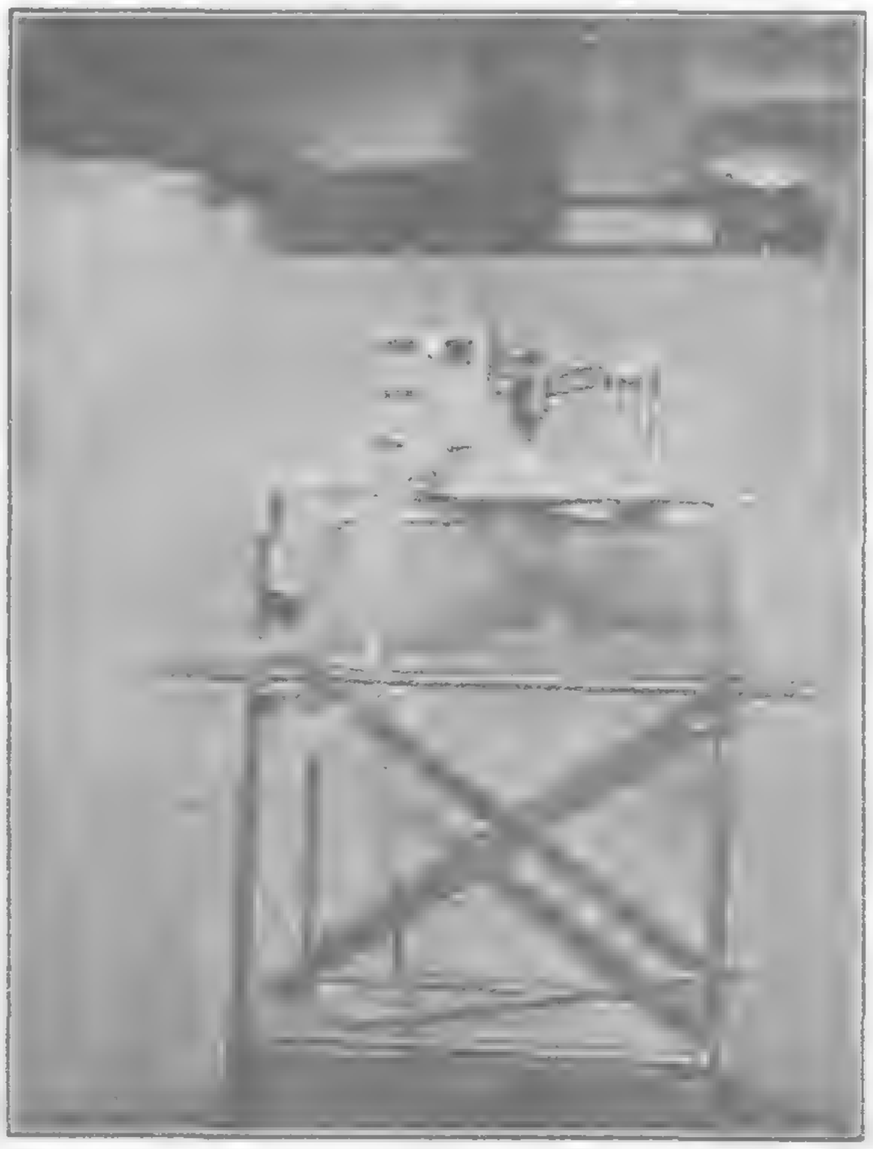
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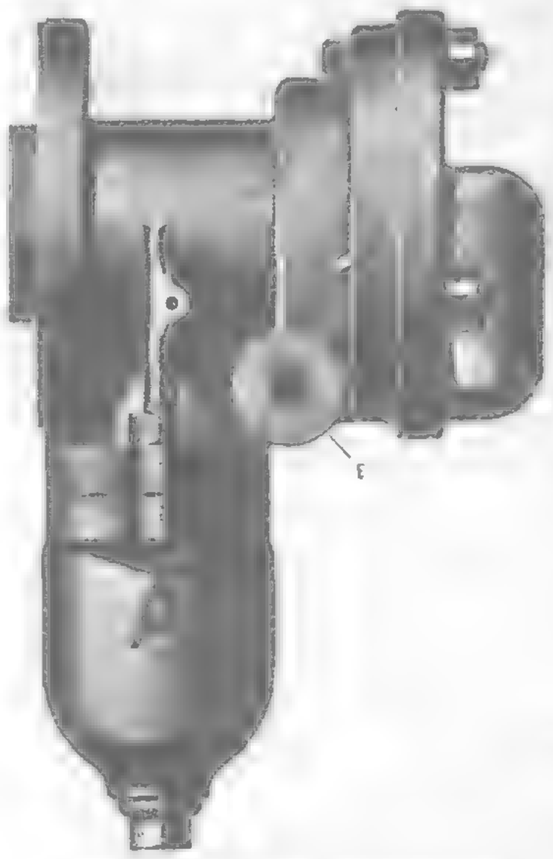
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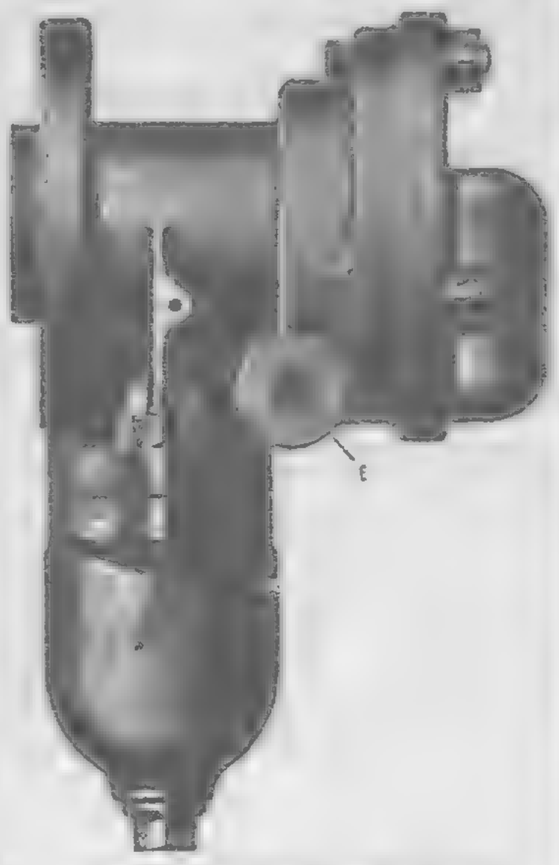
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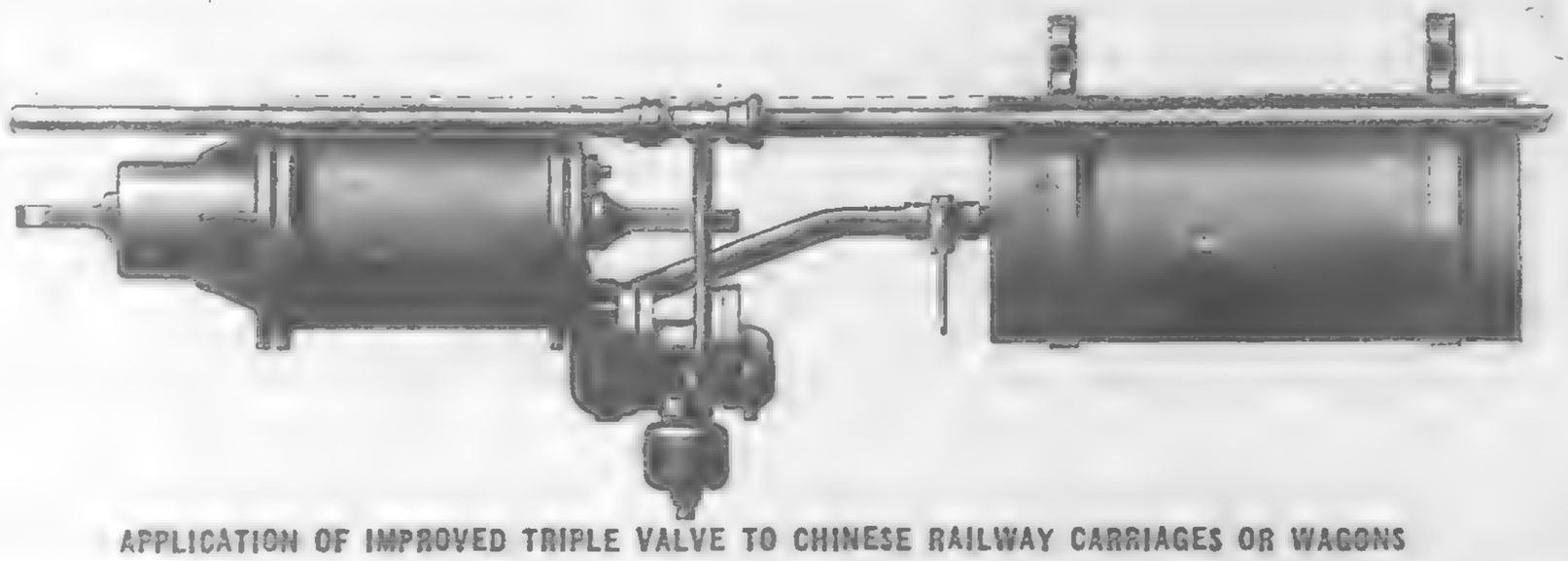
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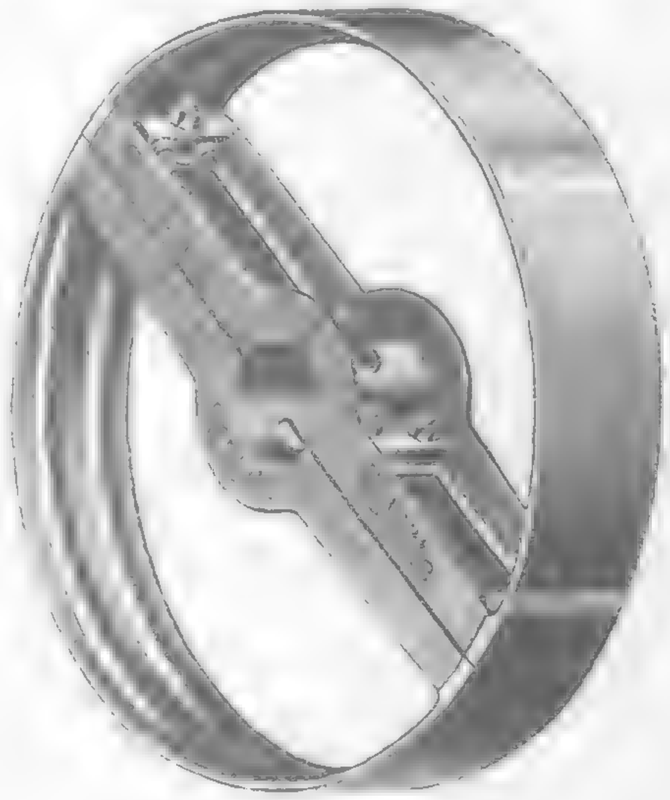
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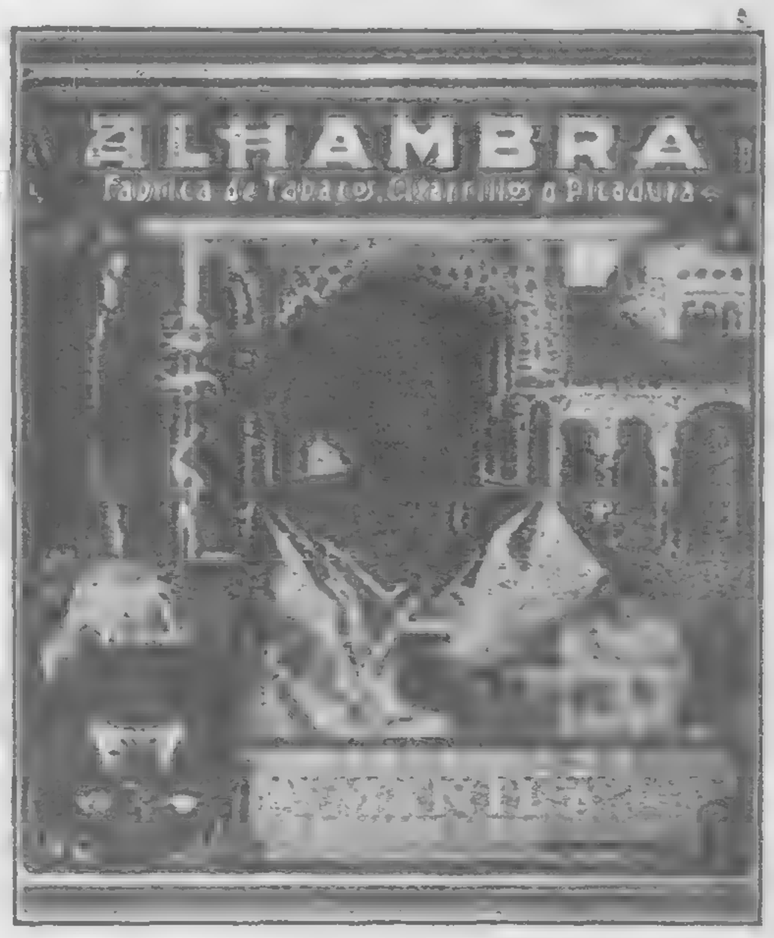
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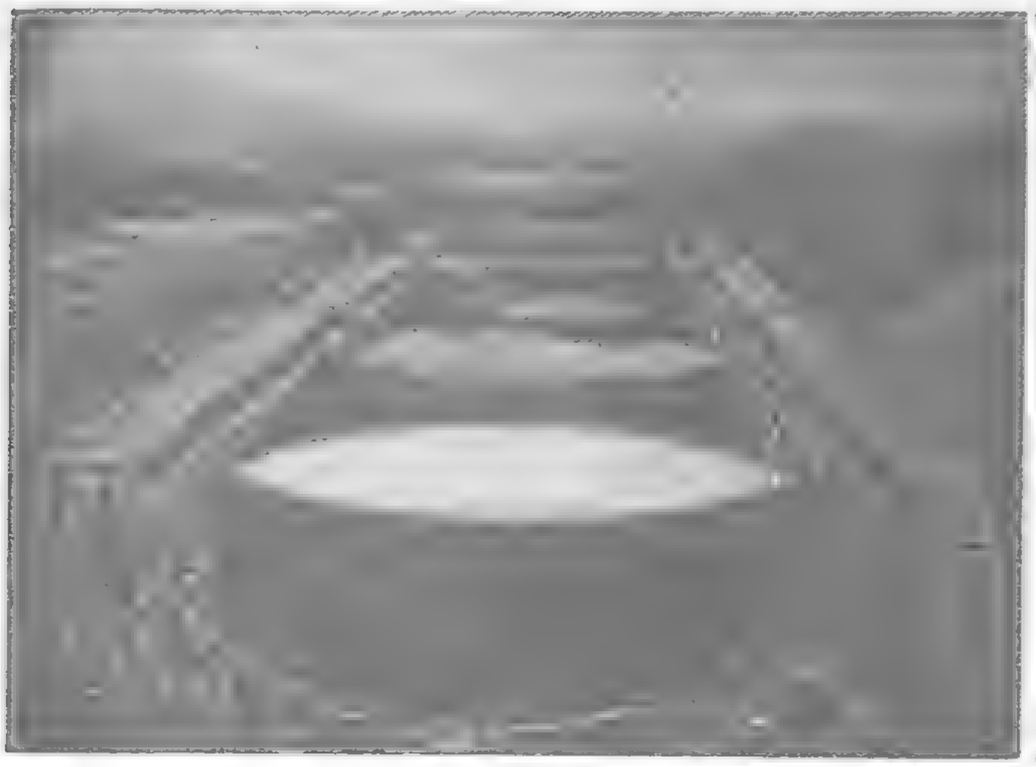


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THE FAR EASTERN REVIEW

COMMERCE • ENGINEERING • FINANCE

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TRADE OF THE PHILIPPINE ISLANDS FOR 1909

The Annual Report of the Insular Collector of Customs of the Philippine Islands for the fiscal year ended June 30th, 1909, shows a balance of trade in favor of the islands of over $3,000,000 U. S. C., wiping out the debit balance accumulated during the first five years of American occupation and leaving a credit balance in favor of the islands of $1,074,526 net. The United Kingdom leads in merchandise imported with a value of $5,408,841; the United States, $4,693,831, and the French East Indies $4,275,398. The following comparative table covers the imports from the different countries for the years 1908 and 1909 and indicates the trend of trade:

Country of origin.	1908 Value of merchandise received.	1908 Percentage of total value.	1909 Value of merchandise received.	1909 Percentage of total value.
United Kingdom....	$6,109,586	19.7	$5,408,841	19.5
United States.....	5,079,670	16.4	4,693,831	16.9
French East Indies..	5,746,414	18.5	4,275,398	15.4
China.....	2,499,169	8.0	2,262,037	8.1
British Australasia..	2,046,039	6.6	2,498,949	9.0
Germany.....	1,933,808	6.2	1,731,073	6.2
Spain.....	1,654,480	5.3	1,340,101	4.8
British East Indies..	1,239,084	4.7	745,057	2.7
Japan.....	1,111,863	3.5	1,441,063	5.2
France.....	821,348	2.5	947,064	3.4
Switzerland.....	751,524	2.4	580,466	2.0
Hongkong.....	463,970	1.5	356,661	1.3
Belgium.....	342,365	1.1	299,941	1.1
Siam.....	307,507	1.0	168,392	.6
All other countries..	811,918	2.6	1,045,608	3.8
Total.....	$30,918,745	...	$27,794,482	

The following statement, showing the relative value of the principal classes of merchandise imported during 1908 and 1909, indicates a general decrease of importations with the exception of food stuffs, such as fresh vegetables, meats, dairy products, and flour:

Principal classes of merchandise imported.	1908 Invoice value.	1908 Percentage of total value of imports.	1909 Invoice value.	1909 Percentage of total value of imports.
Cotton goods.....	$8,011,834	25.9	$6,944,978	24.9
Rice.....	5,861,256	18.9	4,250,223	15.3
Manufactures of iron and steel.....	2,164,907	7.0	1,933,032	7.0
Provisions, including meat and dairy products.....	1,520,369	4.9	2,176,943	7.8
Cattle, live.....	1,055,236	3.4	755,772	2.7
Flour.....	1,044,570	3.3	1,172,322	4.2
Illuminating oil.....	806,112	2.6	614,334	2.2
Manufactures of leather.....	671,962	2.1	494,138	1.7
Manufactures of vegetable fibers.....	614,139	2.0	441,679	1.6
Chemicals, drugs, and dyes.....	568,916	1.8	440,207	1.6
Coal.....	567,220	1.8	461,465	1.7

The above indicates a falling off in the importation of rice which forms the bulk of the imports from the French East Indies, a falling off of live stock and an increase of cold stores from Australia.

The Collector has the following to say on the cotton goods imported:

"The value of cotton goods, the principal class of importations, was a little over a million dollars less than that of 1907 or 1908, although somewhat above the annual average, as shown by the following values for the past six years:

1904.....	$ 4,962.354
1905.....	6,429.873
1906.....	6,754.369
1907.....	8,416.246
1908.....	8,011.834
1909.....	6,944.978
Total.....	$41,519.654
Annual average.....	$6,919.942

The growing preference for English, Japanese, German, and Swiss cotton textiles, at the expense of the demand for those from other countries, is demonstrated by a comparison of the import values of 1905 and 1909, which show an increase in importations from Great Britain of 22 per cent, Japan 187 per cent, Switzerland 31 per cent, and Germany 37 per cent.

Sources of cotton goods.	1905 Value of imports.	1905 Proportion of total value.	1909 Value of imports.	1909 Proportion of total value.	Increase (+) or decrease (—) 1909, over values for 1905.
		Per cent.		Per cent.	Per cent.
United Kingdom.....	$2,868,359	42	$3,499,452	50	+ 22
Japan.....	230,636	4	662,019	10	+187
United States..	846,354	14	590,635	9	— 30
Spain.....	887,559	14	500,354	7	— 44
Switzerland....	360,838	6	471,885	7	+ 31
Germany.....	313,190	5	429,444	6	+ 37
British East Indies.....	348,677	6	220,450	3	— 37
China.....	268,529	4	218,810	3	— 19
All other countries.....	305,731	5	351,929	5	+ 14
Total.....	$6,429,873	100	$6,944,978	100	+ 8

Total exports from the Islands during the fiscal year 1909 aggregated but $31,044,458 in value as against $32,829,816 for the previous year. The reduction in value does not, however, indicate a decrease in production, but is due, as has heretofore been intimated, to the lower price at which hemp shipments were invoiced and to the suspension of sugar shipments on account of pending tariff legislation. Thirty-three per cent of the total export value represents shipments to ports in the United States, which stands at the head of the list of countries of destination of local products. Great Britain, the next in order of relative importance in the export trade, is credited with exports to the value of $5,846,900, and France purchased Philippine products to the value of $4,261,382, Hongkong $2,271,016, Spain $1,989,931, China $1,968,240, and Belgium $1,114,335. These figures, when compared with those of 1908, indicate a decrease in the value of exports shipped to the United States, Great Britain, and Hongkong, due to the causes referred to above, the first two being the principal markets for hemp, and the latter for sugar. Exportations to France, Spain, China, Belgium, and other countries, consisting of miscellaneous products, show a general increase. The following statement shows the distribution of exports by value, the proportion credited to the principal countries of destination, and the relative increase or decrease during 1909 as compared with corresponding figures for 1908:

Country.	1908 Value of exports.	1908 Proportion of total value.	1909 Value of exports	1909 Proportion of total value.	Rate of Increase (+) or decrease (—).
		Per cent.		Per cent.	Per cent.
United States...	$10,332,116	31.5	$10,254,087	33.0	— 0
United Kingdom	8,870,923	27.0	5,846,900	18.8	— 34
France.....	3,905,878	11.9	4,261,382	13.7	+ 9
Hongkong.	2,438,438	7.4	2,271,016	7.3	— 7
Spain.....	1,719,612	5.2	1,989,931	6.4	+ 15
China.....	1,527,323	4.8	1,968,240	6.4	+ 29
British East Indies...	911,767	2.7	193,021	.6	— 79
Germany	692,085	1.8	491,986	1.6	— 18
Australia .	528,208	1.6	458,595	1.5	— 13
Belgium...	516,336	1.6	1,114,335	3.6	+115
Japan.....	493,800	1.5	335,253	1.8	— 33
All other countries	983,330	3.0	1,859,712	6.0	+ 89
Total.....	32,829,816	100.0	31,044 458	100.0	— 5

The subjoined table of the relative value of the principal products exported shows hemp in the lead as in previous years, but that a change has occurred in the relative value of copra and sugar exports:

Product.	1908 Values.	1908 Proportion of total value.	1909 Values.	1909 Proportion of total value.	Rate of increase (+) or decrease (—).
		Per cent.		Per cent.	Per cent.
Hemp.....	$17,311,808	52.7	$15,833,577	51.0	— 8
Sugar, raw.	5,664,666	17.2	4,373,338	14.1	—23
Copra.....	5,461,680	16.6	6,657,740	21.5	+22
Leaf tobacco.....	1,592,123	4.8	1,674,033	5.4	+ 5
Cigars.....	1,084,078	3.3	1,083,702	3.5	— 0
Cigarettes..	38,345	.1	34,518	.1	— 9
All other exportations....	1,677,116	5.3	1,387,550	4.4	— 2
Total.....	32,829,816	100.0	31,044,458	100.0	— 5

Hemp.—In quantity, exportations of hemp fiber exceeded those of any previous year, having aggregated 149,991 metric tons. Of this amount 79,210 tons represent the largest exportation to the United States in the history of the trade. Despite an increase of 34,000 tons, or nearly 30 per cent, in exportation, the average price obtained was 24 per cent lower than that of 1908, resulting in a decrease from $17,311,808, the value of the 1908 output, to $15,833,577, representing the total hemp exportations of 1909.

Copra.—The quantity of copra exported during 1909 aggregated 105,564,781 kilos, or 35 per cent more than shipments of the previous year. The value of copra represented 21 per cent of the value of all exports and was exceeded only by the value of hemp shipments.

Sugar.—Heretofore sugar exportations have held second place in the order of relative value of Philippine products, but shipments during 1909 represent but 14 per cent of the total export value. The aggregate consignment

(Continued on page 352.)

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THE POLICY OF THE PHILIPPINE ADMINISTRATION

The advancement of the material interests of the Philippine Islands was the keynote of the inaugural address of His Excellency, the Hon. W. Cameron Forbes, Governor-General of the Philippine Islands, delivered on November 24th upon assuming the duties of Chief Executive. His Excellency has always been to the fore in the encouragement of better inter-communication and industrial training, and is a firm believer in the capacity of Filipino labor working under favorable conditions and properly rewarded. He emphasized his position when he said:

"I am opposed to the admission of Chinese labor, nor do I think there is any need for it. The Filipino can do all the necessary work in the Islands. I have entire confidence that the Philippine laborer, properly treated, properly paid, and given the opportunity to use the money which he receives to better his own condition and that of his family, and to purchase those things for which people are usually willing to work, will respond to the opportunities given and demonstrate the fact that he is fully able to supply all the demand for labor in these islands. What is needed here, is capital. Let us turn our attention to a few comparative figures. The total population of Hawaii is 198,000 people, or about one-fortieth part of the population of the Philippine Islands, now approximately eight millions. The total exports from Hawaii in 1907 were $29,000,000. The total exports from the Philippine Islands for the same year were $34,000,000. In other words, Hawaii produced for export approximately thirty-six times as much per capita as did the Philippine Islands.

"This is not because their laborers are superior, as Hawaii has come here in search of laborers and reports that those few whom they have obtained are equal to their Japanese, Korean and other laborers. Porto Rico has 1,000,000 people, or one-eighth the population of the Philippine Islands, and in 1907 its exports were $27,000,000. Porto Rico evidently does not exercise the same degree of economy in the use of its labor as does Hawaii, for it produces only one-sixth as much per capita for export, and still Porto Rico exports six times as much per capita as do the people of the Philippine Islands. Were these islands to produce for sale to other countries as much per capita as Porto Rico the total exports would be $216,000,000. Were they to produce as much per capita as Hawaii the total exports would be $1,179,000,000 a year.

"The explanation of this lies in the fact that Hawaii has an abundance of capital, employs modern methods of cultivation, manufacture and freight handling devices, and suitable and adequate steamship and railroad facilities. In other words, in Hawaii the work of the laborer counts, in the Philippine Islands it does not."

Before leaving the subject of labor, he directed attention to the unequal distribution of the population of the islands with reference to the neglect of rich areas available for development and the overcrowding of other areas less productive. He also proposed in his policy a distribution of this energy so as to effect a more general benefit to all. In this regard he said:

"An analysis of the census reveals certain peculiarities about the distribution of population in the Islands, some regions being densely over-populated and others being practically without inhabitants. Curiously enough it is not always the richest sections that support the most people, and from many districts come complaints of the difficulty of getting an adequate and reliable supply of labor. I think the Government can very properly use its vessels to provide free transportation to families wishing to move to those cultivated regions where laborers are scarce and thus increase the general production of the islands. The Bureau of Labor has made some progress along these lines."

Turning from the subject of labor, His Excellency plunged into the real problem, the pressing need, the element necessary to give Philippine labor the opportunity to assert itself as it had asserted itself in Hawaii. "No, it is not labor that is wanted here, it is capital," he declared. "Many Filipinos," he continued, "have a tendency to oppose the introduction of capital into these islands, either from the United States or from foreign countries, fearing lest somehow it should militate against the realization of their aspirations. In my judgment it will have the opposite effect. It is true that it might be possible in the course of several generations to develop the latent resources of the Philippine Islands without the assistance of outside capital and finally to accumulate enough capital to develop the domestic business from within. But why wait? We had better attract for our use the accumulations of wealth already made in other countries, sure that the advantages which flow from them will far more than offset any possible disadvantage due to the fact that some of the profits will leave the country or that the owners of the capital will endeavor to influence the administration of the islands or their political status. Capital demands a stable government. Capital is not particularly interested in the color or design of the flag. It wants just and equitable laws, sound and uniform policy on the part of the government, just and fair treatment in the courts. The faith of the United States is pledged that all of these benefits shall be permanently assured to the Filipinos. No capitalist needs feel alarmed as to the security of his investment provided it has been made in such a way as to fulfill the conditions imposed by law.

"The United States stands pledged to the establishment and maintenance of a stable government in the Philippine Islands, not for the sake of such capital as may be invested here, only, but for the sake of the welfare of the Philippine people and of the good faith of the United States before the world. The security of foreign capital is merely an incident in the general security of property and other rights to the Filipino, and both are now permanently assured. It would be good general policy for us to offer every reasonable inducement to capital to come, and with that end in view, to liberalize our land and mining laws and lessen the restrictions which have hitherto tended to discourage investors. My policy will be to hold out the hand of welcome to all people desiring to engage in legitimate enterprise."

He pointed out that the passage of the Payne Bill gave the best market in the world to Philippine products, a privilege not enjoyed by any other country or dependency in Eastern Asia "A new lease of life to the Philippine Islands," as His Excellency appropriatedly termed its application to the Archipelago and its people. It would enable the islanders to greatly increase the production of tobacco, sugar, rubber, silk, etc "This will have a vivifying effect," he said, "which will be felt throughout the length and breadth of these islands and awaken new hope in the hearts of the people who have been struggling against almost overwhelming difficulties."

The greater part of His Excellency's address was devoted to his favorite subjects, that of transportation, good roads, irrigation, industrial and agricultural training, public works, permanent construction, better telegraphic and postal communication, and concluded with a very optimistic review of the situation.

His reference to education may be summed up in two striking paragraphs from his address, viz: "I want to see emphasis laid upon the importance of the practical side of industrial and agricultural education," and again—"the amount of education we shall be able to accomplish in ten years will be very much greater if we devote our first money towards increasing the wealth of the people and later use the resulting increase of revenue for extending our educational facilities."

Of irrigation and its benefits he said, "I liken the work of irrigation and improvement of transportation to cutting the strings which close the mouth of a purse of gold. The gold will pour forth and yield enough for all."

In closing His Excellency gave good, sound advice to the inhabitants of the islands. Of the policy and status of the islands we quote this striking paragraph: "To all of you I say, have confidence. Turn your attention to those occupations which are fitting to a people in the time of profound peace. There is not on the horizon discernible any cloud which indicates any kind of disturbance in the present status of these islands either from within or from without, by war or insurrection.

"The United States is strong, determined, fixed in her policy and not to be dissuaded or

coerced. The development of the Philippines will proceed along the lines originally set forth, strictly adhered to by each successive administration and by gradual process in the line of declared policy, not by spasms and jerks."

And in the concluding paragraph: "Let us reach out the hand of friendship to our neighbor and endeavor to promote an era of good feeling, of ample confidence, of mutual respect, and of co-operation, that we may all secure the realization of the main object to the attainment of which all our energies of this administration are hereby pledged, namely, the material prosperity of the Philippine Islands."

The declaration of policy has met with general approval in every department of industry and His Excellency has entered, undertaken the duties of Executive with the knowledge that he will be supported generously by every interest, both native, foreign and American, having the future prosperity of the islands and the happiness of the inhabitants at heart.

THE DAIREN CUSTOMS

(From our own correspondent.)

Following closely on the recall of Mr. Crane, for alleged indiscret utterances, comes the report that Mr. F. D. Cloud, Acting American Consul-General at Mukden, has been called to Washington to explain certain reports reflecting on the Japanese administration of the Dairen Customs. It is a matter of current gossip throughout Manchuria, that Mr. Cloud forwarded an official report to the State Department at Washington, inviting attention to discrepancies in the Dairen Customs Returns, which strengthened the rumor that large quantities of Japanese imports were finding their way into Manchuria, without the payment of duties. How this report, destined for the American Government, was made public and reached the Japanese authorities is a matter of surmise. It appears, however, that they have protested against the implied charges of smuggling and Mr. Cloud has been called upon to explain. Of course, at this stage of the question, without an exact knowledge of Mr. Cloud's full report, it is impossible to discuss the matter intelligently, but the Dairen Custom Reports for 1908 are at hand for all to read and form their own opinion. A brief study of this report will suffice to explain the situation and throw light on the conclusions drawn by Mr. Cloud. The situation hinges on the treaty by which all imports into the Kuangtung Leased Territory enter duty free, and only when re-exported to Chinese territory is the duty levied. In addition, China agreed that the Imperial Maritime Commissioner of Customs at Dairen and his staff should be Japanese subjects, selected from the regular staff of the I. M. C. All materials and supplies for the use of the South Manchuria Railway lines and branches outside the Leased Territory also are exempt from duty. The Report states that the total value of foreign imports entering the Leased Territory in 1908 amounted to Tls. 18,472,544, of which only Tls. 4,645,879 were re-exported into Chinese territory, leaving a balance of Tls. 13,826,665 for consumption in the sparsely populated Leased Territory. The itemization of imports, given in Mr. Tachibana's report is as follows:—

"The value of goods imported direct from foreign countries during the year under review was Hk. Tls. 17,215,936. Japan had naturally the greatest share in the trade, her contribution being 59 per cent of the total value; America's share was 32 per cent., and the balance, of 9 per cent. was taken up in a descending scale by Korea, Great Britain, Germany, and Vladivostock. From want of Customs statistics for the first half of the year 1907 no accurate comparison of trade in the two years 1907 and 1908 can be given; but according to the Japanese official returns, the increase in 1908 over the previous year was put at more than Yen 3,000,000. Of the direct importations, railway materials, chiefly from America—Hk. Tls. 5,797,433—ranks first in point of value; then follow timber of all kinds, from Korea and Japan, Hk. Tls. 1,116,057; cotton piece goods from Japan, in which were included American and English shirtings, Hk. Tls. 1,013,359; rice, mostly from Korea, Hk. Tls. 976,667; metals, Hk. 822,563; machinery and parts, from America, Germany, Great Britain and Japan, Hk. Tls. 872,763; American flour, the greater part of which came through Japan, Hk. Tls. 546,617; sake, Hk. Tls. 544,683; cigarettes, from Japan and Korea, Hk. Tls. 342,784; cement, from Hongkong, Great Britain, and Japan, Hk. Tls. 294,327; coal, from Japan, Hk. Tls. 121,330; sugar, from Hongkong and Japan, Hk. Tls. 114,902. From this it will be seen that the only articles which may be said to have been imported for the use of natives were confined to cotton piece goods, American flour, cigarettes, and sugar, besides a small quantity of kerosene oil, matches, and other sundries, which have not been enumerated here; the remainder, that is, the greater part of the direct foreign imports, was for Japanese enterprises and for the Japanese residing in the Leased Territory and in Manchuria. As to those few items of imports for natives, had not the low quotation of silver prevailed throughout the year, which made merchants hesitate to invest their capital in importing goods into a silver country, a far greater quantity might have found its way into the interior through this port."

In the Statistical Tables concerning the gross and net values of the Maritime Customs trade, on page 25, the net total of foreign imports is given as Tls. 18,472,544. In the special Table given on page 32 concerning foreign goods forwarded to the interior, by railway during 1908, we note that the total value is Tls. 4,645,079.

This report at first glance tends to create a suspicion that a large amount of goods were crossing the border without the payment of duties. It must, however, be remembered—and this point seems to be overlooked—that the one place in the Far East, where they are really doing things is at Dairen. While China and other parts are building air castles, the Japanese are going quietly ahead, and with unlimited funds, are creating a city and port which will soon rise to the first rank in the Orient. Transportation facilities are being increased, wharves extended, new streets constructed, electric tramways, gas works, industrial plants, new car shops, cement works, and fine substantial business edifices have been erected during the year, all calling for large quantities of foreign importations. The increased facilities for the outport of the Fushun Mines have necessitated great expenditures, and a closer examination of the Returns will help to explain away some of the discrepancies, as it is quite possible that Mr. Tachibana has omitted to properly classify his items.

		Taels.
Railway materials duty free		5,797,433
Timber of all kinds:—		
Imported	1,116,057	
Re-exported	133,189	982,868
Metals:—		
Imported	822,563	
Re-exported	219,646	602,917
Machinery and parts:—		
Imported	872,763	
Re-exported	None	872,763
Cement:—		
Imported	294,327	
Re-exported	None	294,327
Coal:—		
Imported	121,330	
Re-exported	None	121,330
Oil American:—		
Imported	885,499 (gals.)	
Re-exported	147,457	
Leased Territory Consumption: 738,042 gallons @		132,847
Rice:—		
Imported	976,667	
Re-exported	414,085	562,582
American Flour:—		
Imported	546,617	
Re-exported	152,076	394,541
Sake:—		
Imported	544,683	
Re-exported	218,486,	326,177
Cigarettes:—		
Imported	342,784	
Re-exported	222,170	120,614
Sugar:—		
Imported	114,092	
Re-exported	None	114,092
Consumed in Leased Territory		10,322,481

So the Report explains to the reader the following:—

Net Foreign Imports	Tls. 18,472,544
Total Exports by railway	4,645,079
Value of Imports used on Railway or leased territory	Tls. 13,827,465
Comparison of Returns showing consumption of foreign imports by Railway and Leased Territory	10,322,481
Balance unaccounted for by returns	Tls. 3,504,984

And from this point it is impossible to follow the Report further, owing to the misleading and confusing manner of presenting the returns. Here is an apparent discrepancy which without proper light on the subject leaves room for many surmises. We have seen many examples of purposely misleading statistics, compiled for a public who never bothers to read them, and we commend our readers to the Dairen Custom Returns as a shining example. Imports are classified according to quantities, with values omitted, and the only light on the latter is the brief paragraph in the written report, giving the total values of a few of the leading articles.

On the other hand the table of goods forwarded into the interior by Railway give either quantity and value, and the itemization is impossible to check with the import table. This latter table starts off to tell us that in 1908 4,398,730 gunny bags valued at Tls 315,511 were forwarded into the interior by rail. We turn to the Main Import Table to find what the total Imports were, and the value of the bags employed at Dairen, but we find no mention of any such importations for 1908 or the latter half of 1907, so the inference is that they were previously imported. The item of Building Materials in this list cannot be verified from the main table. Again the list gives Tls. 25,900 of Russian Oil exported, but it is not to be found in the other table.

Japanese importers at Dairen, it is claimed, invariably declare their imports into the Leased Territory at an increased valuation to secure a higher commercial rating. However, when these goods are re-exported and have to pay duty, the tendency is the other way and actual costs or undervaluation is the rule, which practice in itself would explain for a large discrepancy in the Custom Report.

The Taels 3,504,984 balance, which is impossible to check up in the two reports, can undoubtedly be accounted for by the practice of Dairen merchants in overvaluing their imports, and in the items of cotton goods which no one outside the I. M. C. can check. It is incredible that any huge scheme of evading the customs is being practiced knowingly by the Japanese authorities, as such a breach of good faith would place the nation outside the pale of sympathy. Japan has too much at stake in Manchuria to descend to such tactics, and the imputation of such a charge would naturally be resented. However, if Japan is to stand sponsor for everyone of her subjects employed by the Chinese Imperial Customs, and resent deductions based on incomplete and misleading statistics, she will invite criticism, as long as the present system prevails, and a Japanese official administers the Dairen custom house.

Japan cannot be held responsible for the working of China's Foreign Customs which, as long as British Trade predominates in China, must be controlled by a British Inspecter General of Customs. And under this régime Customs Returns are so tabulated and arranged that British trade will always predominate. The crux of the situation is at Hongkong, a British free port, where no impert statistics are published. All exports from Hongkong are credited to British trade, although a large percentage originate in other countries.

The impossibility of properly checking up Chinese Customs Returns has given rise to many criticisms from various sources.

If Japan can on her own initiative induce Mr. Tachinaba to publish an intelligent report of Returns the coming year, it will set an example which may well be followed all al ong the line.

TRADE OF THE PHILIPPINES

(Continued from page 349)

amounted to but 112,379,655 kilos, equivalent to 74 per cent of the quantity credited to 1908, or less than the annual output of any year since 1904. The decrease in exportation is due to the fact that shippers are holding their sugar awaiting a revision of the United States tariff, expecting that the China market price, in the event of free trade with the United States, will necessarily be governed by offers of American buyers. The actual shipments to the United States during the year were some 28,000 tons less than during 1908, and as long as oriental markets depend upon the Philippines for their supply of local grades it is not believed that any considerable quantity will be diverted to a new market in the United States.

LEAF TOBACCO.—Exportations of leaf tobacco during 1909 are represented by 5 per cent of the total export value and amounted in quantity to 10,729,159 kilos, which was but a slight increase over the quantity shipped during the previous year.

CIGARS.—A decrease of over one million cigars is indicated by a comparison of the number exported during 1909 with the exportations for the previous year. The exportations for 1909 aggregated 116,278,000 of which 2,696,000 were consigned to the American market.

In addition to the number regularly declared for exportation, 1,505,577 cigars were received on vessels in small lots for consumption thereon, or for the personal use of travelers.

FOREIGN CARRYING TRADE.—The commercial intercourse with other countries at all ports was effected by 764 calls and 750 departures of foreign vessels, representing in the aggregate a movement of 2,802,893 registered tons.

NATIONALITY OF CARRIERS.—British vessels brought imported merchandise to the value of $16,473,516 and were laden with outward cargoes invoiced at $25,357,969. Imports aggregating $4,596,338 and exports to the value of $2,373,560 were carried in Spanish vessels. The distribution of the carrying trade values is shown by the following statement:

Nationality of vessels in which carried.	*Value of cargoes.* Imported.	Exported.
British	$16,473,516	$25,357,969
Spanish	4,596,338	2,372,560
German	3,026,574	1,036,411
Norwegian	1,344,908	218,245
Japanese	943,555	1,205,421
Domestic	656,479	155,033
French	306,965	505,248
American	267,637	193,571
All other	178,510	
Total	$27,794,482	$31,044,458

The total import and export trade with the United States was represented by a value of $14,947,918, while the merchandise carried by American vessels aggregated but $461,208. On the other hand, British vessels carried cargoes to the value of $41,831,485, or 71 per cent of the total import and export trade, while merchandise shipped to and received from England aggregated but $11,255,741.

FINANCIAL TRANSACTIONS.

Gross receipts.—The gross receipts for the Bureau of Customs at all ports amounted to $8,539,098.87. They were greater than the receipts of any year since 1902 and exceeded those of 1908 by $221,078.48 and show a surplus over the annual average for the period of American occupation of over $1,806,055. Import duties collected aggregated $6,624,093.80, export duties $1,442,666.20, wharfage dues $294,487.18, storage collections $9,226.59, receipts from sales of customs stamps $35,189.85, and miscellaneous collections $133,435.25. While there is a decrease in the import duty collected, larger receipts from export duties, wharfage dues, and miscellaneous sources are responsible for the increase in the gross amount.

The foregoing figures include receipts accruing to the credit of the government of the Moro Province and to the current appropriation of the Bureau of Customs, and moneys subject to refund. The net amount collected for account of the generral evenues was $7,652,054.57.

Expenditures.—The total expenses of operation of the Bureau of Customs during the year at all ports aggregated $475,031.31. This amount, due to extraordinary expenses incurred in providing the service with new launches, exceeded that of the previous year by $23,568.18, whereas the actual current expense of maintaining the service was considerably less than that of the previous year.

Of the above amount, $20,902.04 represents the expenses of the service at Moro Province ports, borne by the funds of the Moro government. The total expenditures from the appropriation for the Bureau of Customs amounted to $475,416.46, of which $454,129.27 was charged to expenses of the service, while $21,287.19 represents the value of property and supplies held in suspense in the stock account until issue for actual use.

Cost of Collection.—By computing the cost of collecting the customs receipts upon a basis corresponding with that used by the United States Treasury Department in arriving at the cost of collecting customs revenues at American ports, taking into consideration only those expenditures made for purely customs purposes, it is found to be considerably less than that of any port of the United States where the volume of business corresponds with that of the Philippine ports. The following statement shows the cost of collection upon that basis at each port in the Philippine Islands during the past year:

PORT.	*Cost of collecting each dollar.*
Manila (a)	$0.0348
Cebu	.0257
Iloilo	.0382
Balabac	1.4320
Total, Insular Government	.0344
Jolo	.1109
Zamboanga	.0951
Davao	8.1682
Total, Moro Province	.1166
Total, all ports	.036

MANILA HARBOR.—Upon the completion of the Government piers now under construction it will become necessary to arrange for transportation facilities from the piers to the business section of the city before the commercial public can receive the full benefit of a modern system of discharging and handling import cargo. This also applies with equal force to merchandise for export. The most feasible plan for delivering cargo from the piers to the importers' warehouses seems to be by electric or steam trucks of large capacity, or by means of the street railway system. Under present business conditions the tonnage of import cargo alone, which would be discharged over these piers were they in use, would amount to approximately 150,000 tons per annum, or 12,500 tons per month, and this calls for up-to-date transportation facilities. During storms and heavy weather the wave action in the harbor is of sufficient force to seriously interfere with the lading and discharging of cargo, especially along the fairway directly in line with the entrance. For this reason the previous recommendation of this Office that the present gap in the breakwater be closed and that a new channel be dredged around the south end of the breakwater is renewed. If this is not deemed necessary, it is recommended that the present opening in the breakwater be reduced to not to exceed 400 feet in width. It is further recommended that that portion of the harbor between Engineer Island and the entrance be dredged closer to the breakwater in order to provide additional mooring ground for deep-draft vessels. It is also recommended that the harbor be carefully platted for the location of mooring buoys and that buoys be planted by the Government in sufficient number to accommodate all vessels that may enter this port.

PASIG RIVER.—No improvement has been made in the conditions existing in the Pasig River since last year's report, and the same unsatisfactory state of affairs in so far as they relate to the berthing space available for coastwise vessels loading and discharging cargo still exist. In order to provide better facilities for the berthing of coastwise vessels and the handling by them of incoming and outgoing cargo, the following recommendations are made:

1. That the river wall between the Bridge of Spain and the Magallanes Monument be completed at once.

2. That the river wall on the south bank be continued from the Maestranza to Fort Santiago with fill behind the wall.

3. That Government Departments and Bureaus be required to vacate all of the space occupied by them on either bank of the river that it is possible to spare and that they eventually be required to vacate all space occupied by them on the north bank of the river.

4. That a bridge with easy approaches be built across the river from Calle Rosario on the north side, in order to permit the ready transportation of merchandise to and from coastwise vessels berthing on the south side of the river.

CEBU.—There was a steady increase in the value of business transacted at the port of Cebu during the year just ended. From July 1, 1908, to June 30, 1909, customs receipts in all amounted to $1,046,368.64, or $176,554.60 more than the receipts at that port during any previous year since American occupation. This increased revenue was due to larger importations of foreign merchandise, as well as to a marked increase in the shipment of Philippine products. The volume of hemp exported shows the largest increase in the history of the port. During 1908, 27,788 tons of this fiber were exported, and shipments in 1909 amounted to 36,925 tons. The total hemp shipments were invoiced at $3,799,452, while copra valued at $1,707,939. sugar at $145,714, and other products at $25,418 contributed to the total export value of $5,678,523, an increase of $72,116 over the corresponding value of the previous year.

One of the attractive features at the port of Cebu is the recently constructed wharf at which 1,775 vessels were accommodated during the year. It is estimated that the use of the new wharf has resulted in a saving to commercial interests since its completion of not less than $125,000.

In connection with other port works a pumping plant has been installed by means of which the Government furnishes water at a nominal price to all vessels requiring it.

The completion of the port works, the operation of the railway, the opening of the Cebu-Toledo Road, and public highways in the course of construction all have been factors whose favorable influence has been felt.

ILOILO.—Customs receipts at the port of Iloilo during the fiscal year 1909, amounting to $724,748.48, exceeded the receipts of all previous years except those of 1901. The increase was due principally to larger importations, they having been the greatest in the history of the port. The receipts from exports show a falling off which is explained by the fact that exporters are holding some 48,000 tons of sugar in warehouses, pending the final action on the United States tariff bill. There was four times as much agricultural implements and machinery imported at Iloilo during the past fiscal year than during any previous twelve months. It is also worthy of note that the quantity of rice which has long been the chief article of importation was not as great as for 1908. Sugar, sapan wood, and copra are the principal products exported from Iloilo. Sugar shipments during the year amounted to 81,000,000 kilos, of which 23,000,000 kilos were consigned to United States ports and 58,000,000 to purchasers in China and Japan. The entire output of sapan wood is shipped to China where it is used in making dyes. Formerly all of the copra from Iloilo was shipped to Manila in small lots and exported from there, but during the past nearly 500 tons of this product were exported direct.

The marked increased activity of commercial firms, the large importation of steam plows and other agricultural implements, a substantial increase in the area of land under cultivation, an exceptionally large rice crop, and an enormous output of hard wood for building purposes are indicative of an exceptionally prosperous year in all lines of business.

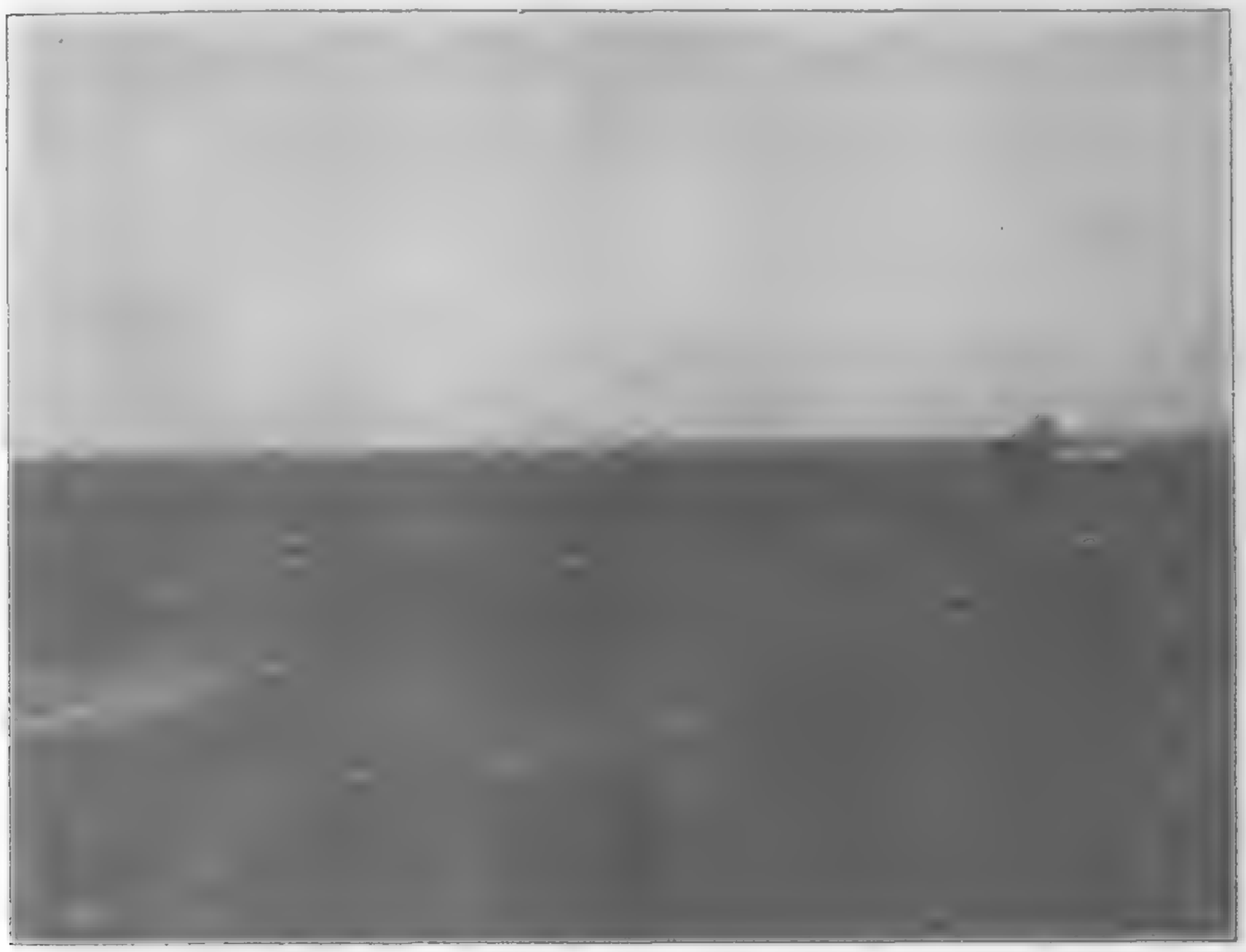
(a) Including collections at Aparri (coast district.)

MEDICAL SURVEY OF A PHILIPPINE TOWN

The most important work undertaken by the Philippine Government is the continued fight against disease in all its forms and perhaps the most interesting and unusual was the recent medical survey of the town of Taytay in the province of Rizal under the direction of the Bureau of Science and the Bureau of Health.

The Bureau of Science originally contemplated the undertaking of this survey, but about the time organization was being effected for the expedition, the Bureau of Health desired to make a similar survey for the purpose of investigating hookworm infection, so that the two bureaus co-operated in the work. A complete report of this important survey, the first of its kind so far as we have learned, appears in a recent number of the Philippine Journal of Science. The Journal publishes an introduction by Dr. Richard F. Strong, chief of the Biological Laboratory, Bureau of Science, covering the purpose of the survey and then follows a report on the "Geology and Water Supply of Taytay by Mr. George I. Adams of the Division of Mines," "Bacteriological Analysis of the Water Supply" by Moses M. Clegg of the Biological Laboratory, Bureau of Science, "Chemical Analysis of Taytay Waters" by Dr. George F. Richmond and Dr. V. Q. Gana of the Chemical Laboratory, Bureau of Science, "Principal Foods Utilized by the Natives" by Dr. E. D. Merrill of the Botanical Section of the Biological Laboratory, "The Food of the People of Taytay from a Physiological Standpoint" by Hans Aron of the Physiological Laboratory of the Philippine Medical School, "Mosquitoes and Other Insects" by Dr. Chas. S. Banks of the Entomological Section of the Bureau of Science, "Vital Statistics" by Dr. Paul Clements of the Insular Bureau of Health who also contributes a paper on "General Sanitary Conditions," "Animal Parasites of the Intestine" by Dr. Philip E. Garrison, Assistant Surgeon of the U. S. Navy, detailed as medical zoologist to the Biological Laboratory of the Bureau of Science assisted by Dr. Ricardo Leynes and Dr. Rosendo Llamas; a "Table of Physical Examinations" by Dr. Fred. B. Bowman of the Biological Laboratory, Bureau of Science, assisted by Dr. Leoncio Lopez, Dr. Vicente E. Manapat and Dr. Vicente Rivera, "Examinations of the Blood with Special Reference to Malaria" by Dr. Luis Guerrero and Dr. Victor Sevilla, "Filariasis, Malaria, Tuberculosis, Typhoid Fever, Goitre, Beriberi, Venereal and Skin Diseases" by Dr. Henry J. Nicholas, Lieut. Medical Corps, serving on the U. S. Army Board for the Study of Tropical Diseases and of "Disposal of Excreta" by Dr. Philip E. Garrison. All these interesting papers covering in the minutest detail the work of the different branches of the survey are reviewed and summarized by Dr. Richard P. Strong in an interesting paper which concludes the number.

In his introduction Dr. Strong explains the nature of the survey, the methods employed in carrying it to a successful conclusion, and its value in the campaign against disease and poor sanitation. He writes:

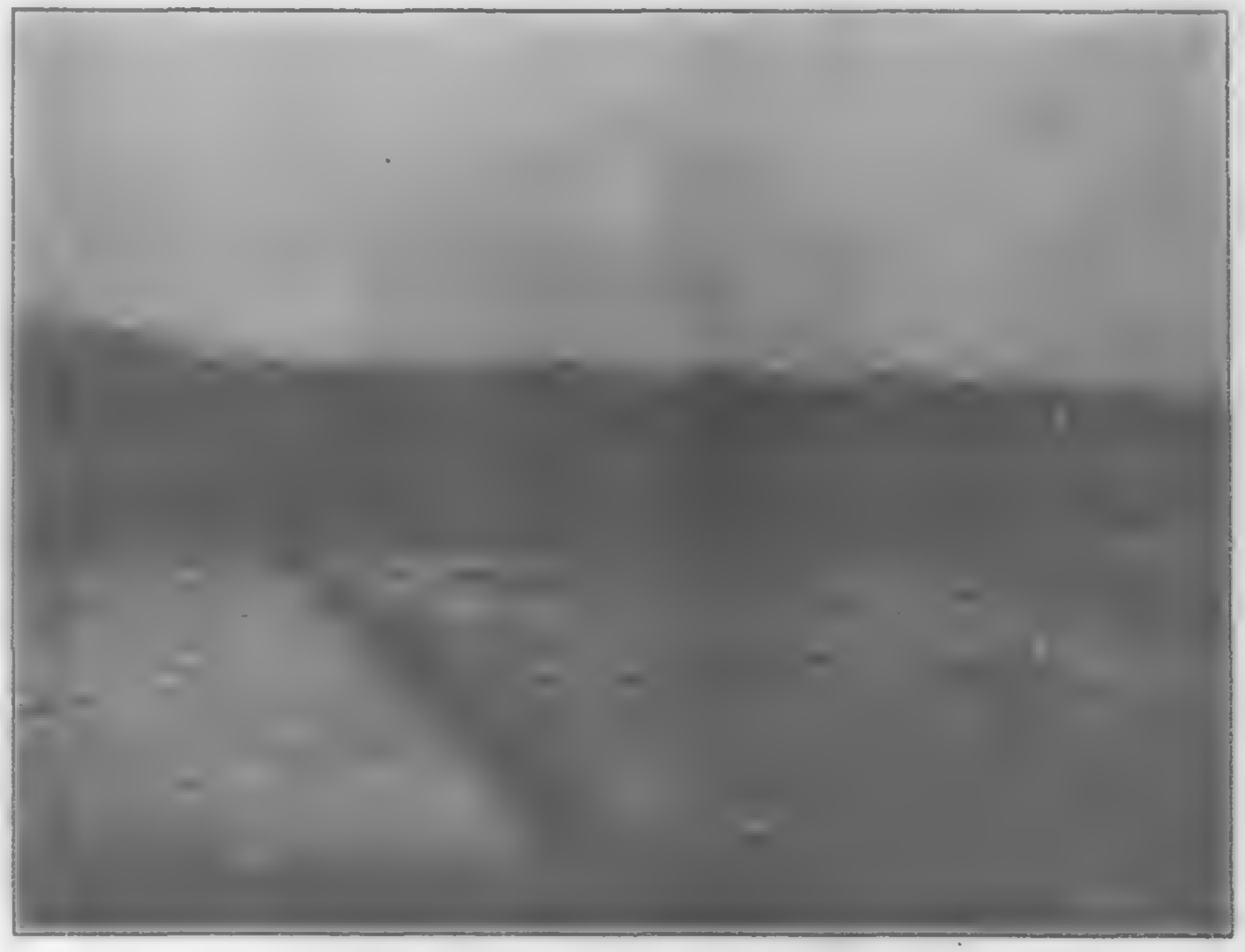


TAYTAY FROM THE EAST

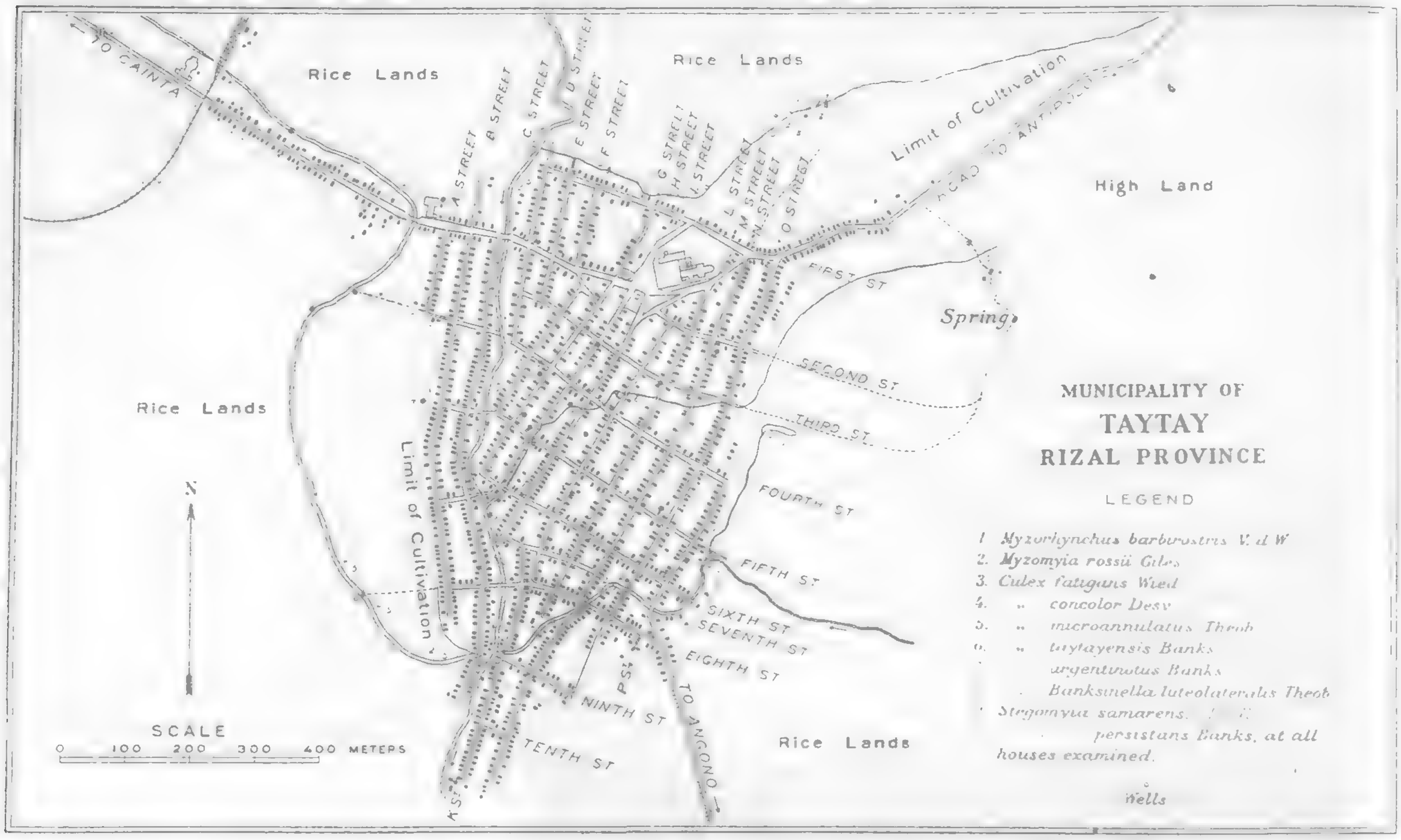
"It has been the policy of the Biological Laboratory for several years past to send men to various provinces outside of Manila, when opportunity presented itself, for the study of disease. During the present year, it was suggested by Doctor Garrison, United States Navy, medical zoologist of the Laboratory, that a group of advanced students from the Philippine Medical School be selected and taken by him during their vacation of several months to some provincial town where a dispensary could be established and a study made of the diseases affecting the inhabitants. It was the intention not only to provide the students with practical training in medical zoological work, but at the same time to examine the inhabitants of the town, particularly with reference to the parasitic diseases with which they were affected. After consultation with the Director of the Bureau of Science and the Chief of the Biological Laboratory, it was decided to organize a more extensive expedition for the purpose of carrying on a complete medical survey of the inhabitants of such a town. A short time after this, the Director of Health requested assistance from the Biological Laboratory in carrying on a campaign in a provincial town for the purpose of examining and treating the natives for infection with intestinal worms, with the special purpose of determining the importance of hookworm infections in relation to the public health. As the extent and the nature of hookworm infections in the Islands was one of the questions which the expedition from the Bureau of Science had already planned to investigate, it was agreed that the Bureau of Health should join in the work of this survey.

"The object of the expedition as finally planned was to make a complete study of a native town in the Philippine Islands under normal conditions. The investigations were performed by members of the staff of the Bureau of Science and of the Philippine Medical School, by three of the students of the school, and by Doctor Clements of the Bureau of Health. The laboratory work extended over a period of three months, March, April and May of the present year.

"The town of Taytay, which is situated on the eastern border of the Mariquina Valley, Province of Rizal, Luzon, was chosen because of its size (it has a population of about 6,000), and because in the past it has suffered severely from smallpox and from several epidemics of



LOOKING TOWARD TAYTAY ACROSS THE RICE PADDIES



TYPE AND DISTRIBUTION OF MOSQUITOES OF TAYTAY. (BANKS)

cholera, and has had a bad reputation from a sanitary standpoint. If a larger town had been chosen, it obviously would have been impracticable to have made as careful a study of the inhabitants as was planned.

"It was the intention during the survey not only to observe how much sickness there was present and the nature of such sickness, but to examine into the character of the population, the conditions under which the people lived, the food which they ate, the water which they drank, and the diseases to which they were liable to be exposed. Following out this idea, a geological study has been made of the contour and formation of the country, the water supply



ROAD TO ANTIPOLO IN TUFF FORMATION

has been examined and a chemical and bacteriological study performed of the well waters of the town used for drinking purposes; a botanical examination of the vegetable foodstuffs and a general one of all material offered for sale in the markets have been carried out. The cost and quality of the food and the nutritive value of the diet of the people, from a physiological standpoint, have been studied. An entomological investigation of the mosquitoes and other insects of interest from a medical point of view has been accomplished. As regards the inhabitants, anthropometric measurements were performed, and in the case of those who visited the station, and particularly in those who were found at all sick or abnormal, a medical history was taken and a physical examination performed; the blood, faeces, and sputum were examined microscopically, and, in many cases where the nature of the complaint warranted, serum reactions, differential blood counts, and examinations of the urine were made. The Bureau of Health in addition, through its representative, Doctor Clements, made a study of the general sanitary conditions under which the people lived, and a study of the vital statistics of the town. A dispensary was established at which all of the cases were treated and furnished with medicine free of charge. Various maps of the town were prepared and a census was taken.



BIG WELL NEAR MUNICIPAL BUILDING

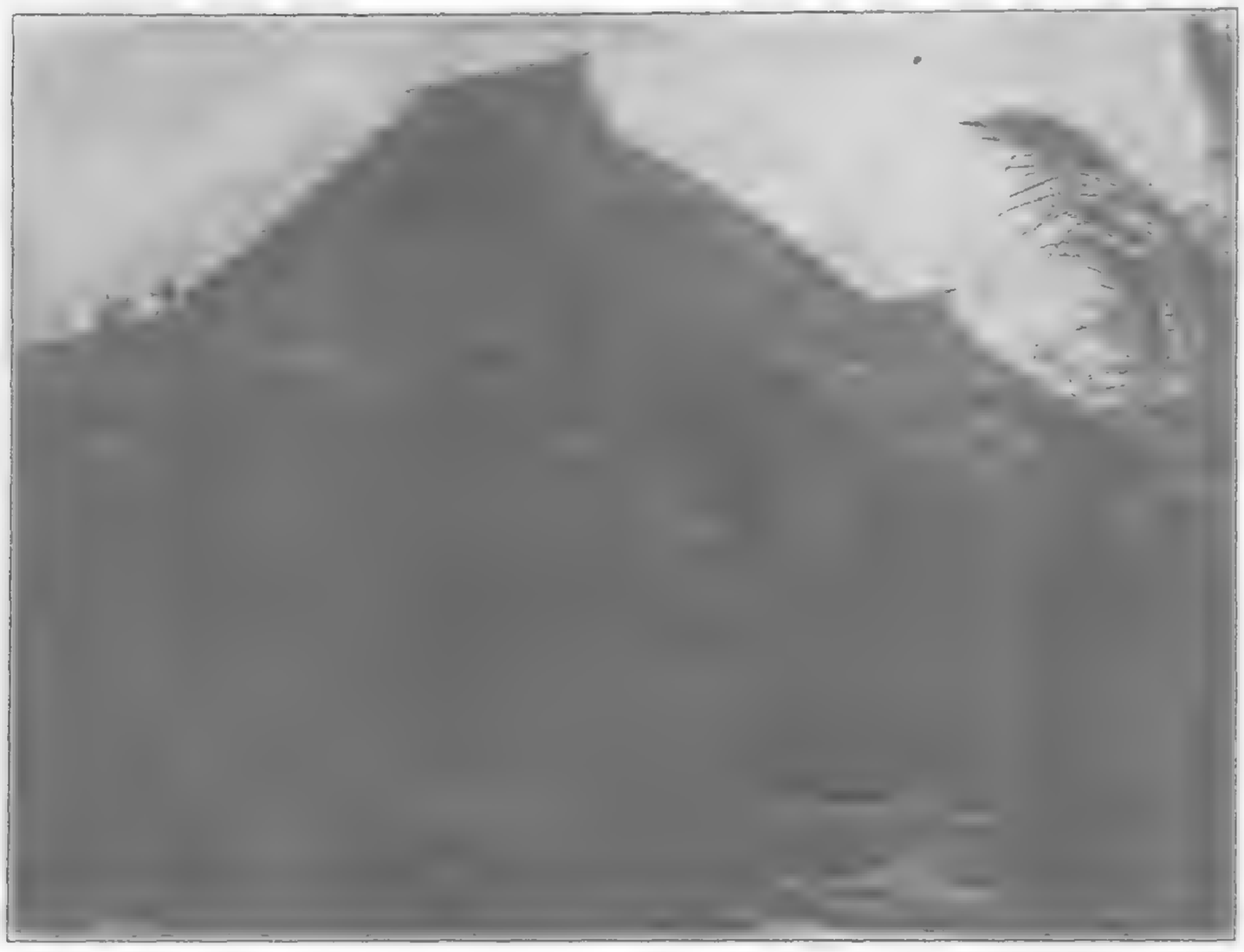
"*Laboratory investigations.*—The helminthological work and the general laboratory investigations of the expedition carried out at Taytay were placed under the direction of Doctor Garrison, and it is largely to his efforts and to those of Doctor Nichols, of the United States Army and of Doctor Clements, of the Bureau of Health, that the success of this portion of the work is due. A suitable nipa house near the center of the town was rented, and in this was established a station comprising the laboratory, a clinic and a dispensary. An adjoining house was rented also, in which the members comprising the expedition lived. The people throughout the town were invited to visit this station, first, as a place of curiosity for those who were well, where they could see laboratory apparatus, observe their own blood under the microscope, etc.; and second, as a place which offered to those who were sick an opportunity of being cured and of obtaining medicine free of charge. The plan of work at the clinic and laboratory was outlined as follows: To each individual who presented himself a ticket bearing his name was given; and a number, together with the name, sex, age, occupation and residence of the individual, was placed upon a clinical record card. A separate alphabetical index of names was kept in order to avoid error if a ticket were lost. Each person was then supplied with a test tube or bottle in which he was instructed to bring a specimen of his faeces on the following day. As many as could be examined were then passed to another room where they were subjected to a physical examination. A haemoglobin estimate and an examination for malarial or other parasites was then made of the blood. The results of the examinations were then entered on the clinical card. In addition, separate records were kept of all laboratory examinations. If an individual proved of any particular interest from a medical standpoint, he was detained for further examination; otherwise he was discharged, or, if sick, was sent with his clinical card to the dispensary where his ailment was prescribed for and where he was given special instructions regarding treatment or regarding his return to the clinic and the bringing of specimens of faeces, sputum, or urine. In addition to the treatment of patients at this daily clinic, those who were unable to attend were visited in their homes, all the records of these cases being kept likewise. The time from 4 o'clock until dark was devoted usually by the members of the expedition to the mapping of the town and to making a census of the population. In the course of this work, the entire town was covered by a house-to-house inspection, the name, sex, and age of each inhabitant, together with the surrounding conditions under which he lived, being entered upon a separate card for each house. The members of the expedition were able by means of this census to locate cases of serious or interesting diseases which otherwise might not have come to their attention. In some cases a person afflicted with a disease was able to direct the members of the expedition to other persons similarly afflicted, thus assisting in the discovery of all cases of disease in the town. This was particularly true in regard to goitre and yaws, diseases which the people could recognize easily.

"The results of these investigations have all been collected and published together in the present number of the JOURNAL, with the exception of those carried on by Doctor Bean on racial anatomy at Taytay; these studies are not yet entirely completed and will appear later in Section A, General Science, Vol. IV, No. 5, of the JOURNAL, during the present year.

"While the various divisions of the work were systematically distributed among the members of the expedition, each giving his special attention to the work to which he was assigned, nevertheless considerable of the work was carried on by all the members of the expedition together; as, for example, the mapping of the town and the preparation of the census. Hence, while the individual reports have been written by those members of the expedition who performed the greatest relative amount of work upon the subject, nevertheless it should



OUTHOUSE IN PROXIMITY TO WELL



LABORATORY AND DISPENSARY BUILDING

be understood that much of the work of the expedition was carried out by all of its resident members working together.

"Special bacteriological examinations, such as of the waters of the town and of faeces for cholera vibrios, were performed at the Biological Laboratory in Manila where these specimens were sent daily by messenger.

"In the individual reports, it must be considered that in determining the incidence of certain diseases the members of the expedition relied solely upon the attendance of the individuals at the clinic; while in determining the incidence of the others, practically the entire population of the town was canvassed carefully. Therefore, the results obtained in relation to each disease must be carefully interpreted if they are to be used as an expression of the prevalence of such disease in the general population; obviously the same basis can not be used in computing the percentages for all diseases among the Filipino population throughout the Island of Luzon.

"In the preparation of the reports upon the laboratory work performed at Taytay and the study of disease there, the subjects were considered and discussed jointly by Doctors Garrison, Nichols and Clements, and have been prepared for publication by these gentlemen, Doctor Teague and the writer.

"This expedition is probably one of the most extensive of its kind that has ever been carried out and is certainly the most extensive medical survey that has ever been undertaken in the Philippine Islands. Its accomplishment was largely made possible through the efforts of Doctor Freer, Director of the Bureau, who, before his departure on his vacation early in April, did much to organize, arouse interest in and to stimulate the work of the expedition."

The value of this survey may be gathered from the summary of Dr. Strong and the conclusions arrived at for the amelioration of the undesirable conditions found. While Taytay may not be said to involve conditions in every respect similar to all towns of its size in Luzon, yet in a great measure they may be relied upon to represent generally the status of the average Filipino community and the conditions under which the natives live. Some idea may be gathered in the absence of space to cover the individual reports, from the summary and conclusion of Dr. Strong which concludes the publication in the *Journal of Science.* Some of the most important extracts follow:

"In considering these reports one should bear in mind the original purpose of the expedition, which was to obtain exact and comprehensive knowledge of conditions as they actually existed in a typical Filipino town. The primary idea of the survey was not to develop any special line of research, although it was hoped that new conditions might be discovered. The difficulties in carrying out the investigations were not as great in some respects as had been anticipated; the people throughout the town took considerable interest in the work, and there was comparatively little difficulty encountered in obtaining their consent to submit to a physical examination or to one of their blood, or in securing specimens of sputum, faeces or urine when such were desired.

"From a consideration of the data at hand, it is believed that a satisfactory knowledge has been gained of the diseases prevalent in the community of Taytay and of the conditions under which the people live there.

"As might have been expected, the inhabitants, in building their homes in the lowlands, considered chiefly the conveniences of location in pursuing the agricultural and fishing industries, thus sacrificing the advantages of a healthy location on the hill-lands at the east of the town.

"The town of Taytay, because of its proximity to the cities of Manila, Pasig and Cainta, where Spanish, Chinese and Indians are present in great numbers, probably contains a more mixed population than the average Filipino village situated along the littoral highlands. It is near Lake Bay and as it also lies at the foot of hills and mountains, therefore, both the fisher-folk and the hill people are found in the town

"From the examination of about 500 men, women and children among the visitors at the dispensary who were carefully measured, the physical types and the ear types associated with them which have been previously described by Doctor Bean, were established and the diseases common to some of the types were mentioned. From these studies no absolute conclusions would be justified, but the inference is strong that the blend of European and Filipino which most resembles the Iberian, or Mediterranean race of Sergi, is more susceptible to all diseases—and more especially to tuberculosis—than the primitive type. This may indicate that the European-Filipino type, or its resulting offspring, the Filipino-Iberian type, is less resistant to disease in the tropics than is the aboriginal type on its own soil and in its natural environment.

"The principal occupations of the people are agriculture and fishing. At present their life is not modified to any degree by contact with foreign influence. A slight gain in the population of the town has apparently taken place since 1903, at which time the census showed a population of 5,840 whereas the present census shows one of 6,094.

"The water supply is largely from wells which are generally exposed to surface contamination and to contamination from the hands and feet of those drawing water. A bacteriological examination of the water from these wells, thirteen in number, showed in six of them, over 5,000 microörganisms per cubic centimeter. *Bacillus coli communis* was isolated from seven, and *Bacillus pyocyaneus* from three. Hence the majority have been contaminated by sewage. The chemical examination of these waters showed that in the majority the amount of chlorine and of albuminoid ammonia and nitrites was so high as to also condemn them from a chemical sanitary standpoint. *Amoebae* were found in all but one and *flagellata* in all.

"The natives of the town, of course, drink the water unboiled. From the character of the drink-water supply in the town and its constant exposure to surface contamination and to contamination from the hands and feet of those



INTERIOR OF LABORATORY

drawing the water, it is evident that the population, under the present conditions, must be exposed from time to time to epidemics of cholera and of dysentery.

"Of the protozoal forms of dysentery now recognized, amoebic, malarial and balantidial dysentery are all found and are endemic in the Philippine Islands. With the exception of the amoebic and catarrhal dysenteries, none were encountered in Taytay.

"The cholera spirillum which was sought for carefully was not found in the water from any of the wells, although several species of vibrios were isolated from some of them. Had one of the wells been infected with the cholera spirillum, there would almost certainly have been an epidemic of this disease in the town, whereas during the three months but nine cases of cholera occurred.

Only four cases of typhoid fever occurred during the three months that the examinations were carried on. There can be no serious ground for the idea that typhoid fever is a comparatively rare disease in the Philippines and that those cases which are found in the Islands have been imported.

"In regard to the improvement of the drinking water supply of Taytay, it is fortunate that the geological strata is favorable to drilling; Doctor Adams has reported it is possible that in the southwestern part of the town sufficient hydrostatic head might be encountered to produce an artesian flow.

"The food of the inhabitants of Taytay was found to be of limited variety and almost entirely of local production; some dried fish is imported from Manila. The staple diet consists largely of fish and rice with some fruits and vegetables, and occasionally carabao milk, butter and eggs.

"The cost of the food consumed by the inhabitants usually amounted to between 9 and 16 centavos daily, with an average of 12½ centavos per person. However, it is not believed that the daily ration consumed by these people is the most desirable one for them or that the most beneficial food can be purchased by them for this amount.

"In relation to the entomological study of the town, two new species of mosquitoes were met with, both belonging to the genus *Culex*. Mosquitoes of the subfamily *anophelinae* (*Myzomyia rossii* Giles) were found breeding, particularly in the districts of the town along the banks of streams and in all bodies of stagnant water around the wells; they were most numerous along the stream running through the town. It is interesting to note that the distribution of the *anophelinae*, as found by the entomologist, corresponded very well with the districts in which the cases of malaria were discovered by the clinicians. It is not surprising that only about 2 or 3 per cent of those examined in Taytay were found to be harboring the malarial parasite, since the investigations were carried on in the midst of the dry season, which is the time of year in which malaria in Taytay is at a minimum As far as the conditions for the propagation of malaria are concerned, Taytay is not very unfavorably situated. Mosquito nets were used practically not at all in the town, only about one-half dozen having been seen by members of the expedition.

Infections with animal parasites.—An examination of the faeces of 1,000 persons in the town showed that 95 per cent of the people were infected with some form of intestinal worm. The results of these examinations are in accord with those which have been carried out by Doctor Garrison and his assistants in the city of Manila, which have showed that the Filipinos are almost universally infected with these parasites.

An attempt to discover any localization in groups of the cases infected with *Ascaris*, hookworms, *Trichuris*, *Strongyloides*, *Oxyuris* or *Imocba* in any part of the town of Taytay, in proximity to certain wells or streams, by families or occupations, gave negative results.

"Only 11.6 per cent of those examined were found to harbor hookworms, and none of them presented any symptoms of disease which could be attributed definitely to this parasite. Eighty-two and nine-tenths per cent were found to harbor *Ascaris*, and about 77 per cent *Trichuris*.

"About 1 per cent of the inhabitants were found to be infected with tuberculosis; no focus of this disease was discovered, the cases being distributed evenly throughout the town. Pulmonary tuberculosis was the common form. About 1 per cent of the inhabitants were found to be suffering from goitre. It is interesting to note the very small amount of venereal disease which was observed in the town. On the other hand, yaws was found to be fairly prevalent, 1 per cent of the children being infected.

"From this brief summary of the studies performed at Taytay, it may be seen that while the conditions in this town are generally unsanitary, the death rate varying in different years from 27.91 per 1,000 to 45.42 per 1,000, they at times may become most unsanitary. Under the present conditions, epidemic diseases such as cholera, typhoid and bacillary dysentery are likely to occur from time to time. The history of the town shows this to be the case in regard to cholera. The great epidemic of



THE LARGEST CREEK IN AUGUST AFTER THE RAINS

1882 is said to have gained a foothold first in Taytay. In 1902, and again in 1905, cholera was also epidemic there. If the introduction of cholera at Taytay during the present year had taken place in the rainy season instead of in the midst of the dry one, another epidemic of this disease would likely have occurred.

"In regard to smallpox, general vaccination against this malady was carried out in 1905 and in March 1909. It is interesting to note in this connection that smallpox was present in 1908 and 1 per cent of the inhabitants died with it. The entire mortality of the year was 45.42 per 1,000. In 1907, when there was no smallpox, the death rate was 27.91 per 1,000. Practically all of the deaths from smallpox were among children under 9 years of age; indeed, nearly 90 per cent were among children under 5 years of age; that is, the majority of the children who died from the disease were born after the general vaccination performed in 1905. Therefore, there should be no difficulty in controlling smallpox by means of vaccination.

"There can be no question of the advisability of protecting the inhabitants of Taytay against cholera and perhaps against typhoid fever, also by vaccination. All the evidence that we have from the provinces relative to cholera has shown the practicability and the efficiency of vaccination against this disease as a method of protection.

"It is believed that if a large epidemic were imminent the sanitary authorities would not hesitate to employ vaccination against cholera. It would seem, however, that in the case of towns with sanitary conditions similar to those which exist in Taytay, general vaccination against cholera should be performed in order to protect the inhabitants from a general epidemic of this disease which otherwise might occur were the disease introduced at a favorable season. It is true that the sanitary conditions in Taytay can be improved greatly if artesian water can be supplied to the people, but so long as they pursue their present habits in regard to sanitation —particularly those of eating with their fingers from a common dish, drinking water from a jar which is constantly soiled by the hands, and bathing, washing, and even drinking from the same stream; and so long as faeces are exposed to flies and other insects in the vicinity of the dwelling houses—so long will they be liable to epidemics of cholera.

"In conclusion, it would appear that the sanitary measures to be particularly recommended in Taytay at the present time are supplying the town with an artesian water supply, vaccination against cholera and perhaps against typhoid fever, and an improvement in the present method of disposing of the faeces so that the human excrement is not exposed to flies and other insects and not allowed to lie in close proximity to wells or to houses where food is partaken of. During certain periods of the year something might be done in the way of distributing quinine among those suffering from fever. More extensive prophylaxis against malaria in Taytay is not recommended at the present time."

The accompanying illustrations are reproduced through the courtesy of the Director of the Bureau of Science.



GENERAL GEOLOGIC RELATIONS AT TAYTAY

PRELIMINARY REPORT ON IRRIGATION IN JAVA*

General information.—Java is located between parallels 5° 50′ S. and 8° 50′ S., and from longitude 105° 10′ E. to 114° 14′ E. Its length is approximately 1,000 kilometers, and its average width about 130 kilometers. It varies in width from 90 kilometers at the narrow central portion to 200 kilometers at the wide, east-central portion. Its area is about 125,650 square kilometers. This area is about one-fifth larger than that of Luzon, and slightly less than that of the State of New York. Its population averages nearly 240 per square kilometer (600 per square mile). Its axial mountain range lies slightly closer to the southern coast, and is sharply broken by various mountain peaks and volcanoes, a few of which exceed a height of 3,000 meters above the sea. Several extensive fertile plains, having elevations varying from 50 meters to 750 meters, are located within the general area of the mountain range. Many alluvial plains and deltas exist along the exceptionally regular shore line, which affords few good harbors.

The river systems in general comprise a series of nonnavigable small streams, extending from the elevation axis to the sea. The principal exceptions are the Tji Taroem in the western part, and the Tji Manoek in the west-central portion, which have their origin relatively close to the southern shore, and flow northerly into the Java sea. In the eastern part are the Kali Solo and Kali Brantas, the two largest river systems of the Island. These four rivers are navigable for launches and other small draft vessels for distances varying from about 40 to 175 kilometers.

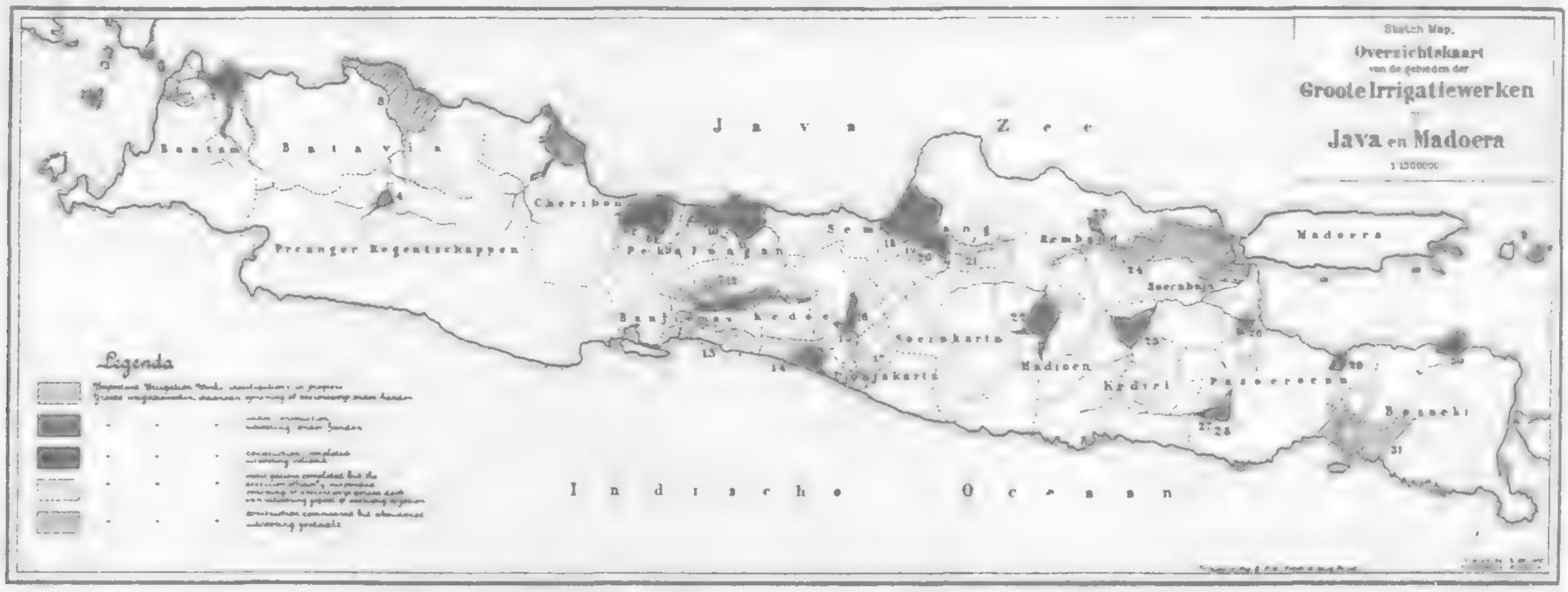
The seasons are characterized as wet and dry. The former occurs during the prevalence of the westerly monsoons, practically throughout the island; the wet season of east Java being slightly later than that of west Java. Thunderstorms prevail during the wet season. The wind pressure is moderate, rarely exceeding 25 kilograms per square meter, which corresponds to a wind of about 50 kilometers per hour. Damage by wind—to vegetation and to structures—is, therefore, exceptionally slight, and harbors of refuge for shipping are not required. The temperature is unusually uniform, the daily temperature ranging from 23° C., to 29° C; and extreme variation from 21° C., to 32° C., is rare.

The rainfall of Java is discussed in a report of the director of the Royal Magnetic and Meteorological Observatory at Batavia, issued in March, 1908, for the years 1879 to 1907. Records of 700 stations are available. The rainfall resembles that of the Philippine Islands in its irregularity as a result of the proximity of mountains, in the length of the wet and dry seasons, and in the intensity of downpour during the rainy season. The lower areas have an approximate average annual precipitation of from 1,500 to 2,000 millimeters, while the mountain stations give records of from 3,000 millimeters to 4,500 millimeters. The maximum annual record is 9,101 millimeters at the station Sumber Redjo, for the year 1900, elevation 1,200 meters. The months of July, August, and September, are the driest.

Compulsory labor is designated as "Heerendienst," and "Desadienst." The former relates to works of the Government, and is limited to-day to furnishing labor and material for road construction and maintenance. The amount of service required up to 1867 resulted in a condition of semi-slavery very similar to the enforced labor required under Spanish laws up to the early eighties. In 1882 this service was further reduced, and, in compensation therefor, a poll tax of 1 to 1.50 florins (₱0.80 to ₱1.20) was levied, which remains in force to-day. In 1906 this tax, for Madoera and Java, aggregated 3,576,138.50 florins (₱2,860,910.80). It is expected gradually to reduce this service on account of the taxes.

When irrigation construction is in progress and free or paid labor is not procurable, on account of an unwillingness to work, the regulations regarding compulsory labor may be enforced, and the execution of works of public value completed, in which case an equitable wage is paid. Compulsory labor may be secured over an area within about 12 kilometers of the work in progress; its value is regarded as about two-thirds of the value of paid labor.

"Desadienst" applies to the compulsory service required in a village or community, and is not fixed in amount. It is required, enforced, and supervised by the head of the village, and applies, without cost to the govern-



MAP OF JAVA SHOWING IRRIGATION WORKS AND CONSTRUCTION

*Excerpts from *Preliminary Report on Irrigation in Java* by J. W. Beardsley, Mem. Am. Soc. C. E. and Consulting Engineer in charge of Irrigation Works, Philippine Islands.



KEDOENG KANDANG CANAL—DISCHARGE SLUICES 550 METERS BELOW HEADWORKS
Canal nearly emptied. Note curved masonry approach to discharge sluices.



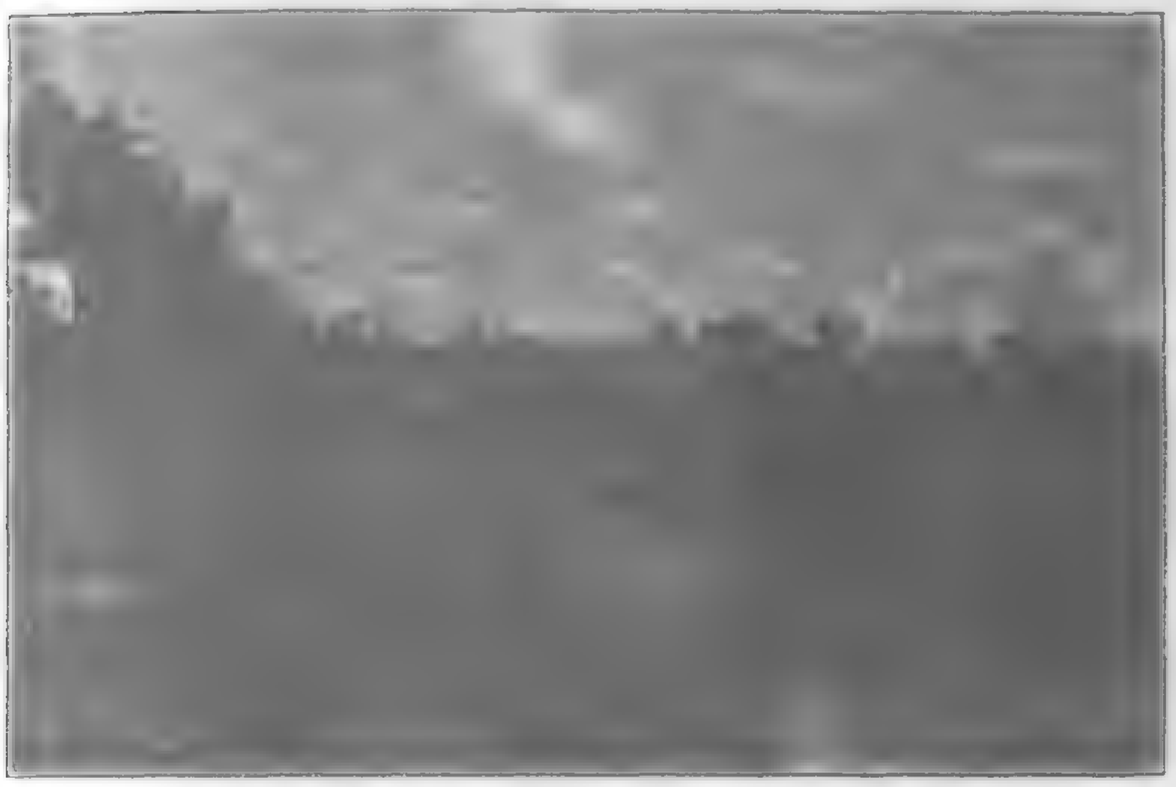
KEDOENG KANDANG CANAL—FRONT VIEW OF THE DISCHARGE SLUICE GATES (OPEN)



KEDOENG KANDANG CANAL—HEADWORKS AND FRONT VIEW OF INLET GATES.
Note pier wall leading to discharge sluices.



MOLEK CANAL—TAKEN FROM BRIDGE.
Metro siphon crossing the Metro River. Discharge sluices at the center of span are open. Diameter of tubes, 1.8 meters. Velocity, 2 meters. Discharge, 10 cubic meters per second.



KEDOENG KANDANG CANAL—CURVED BASIN TO DESTROY ENERGY AT FOOT OF SLOPE.
Fall of water-slope of canal, 1:25. Masonry lining, 0.25 meters



KEDOENG KANDANG CANAL—NEEDLE DAM BELOW INLET TO SECONDARY AND TERTIARY CANALS.



MANTEN AQUEDUCT CROSSING THE KALI MERIE—KEDOENG KANDANG CANAL.
Total length, 125 meters; arch spans, 12, 6, and 4 meters.



KEDOENG KANDANG CANAL—ABOVE NEEDLE DAM.
The canal at this point is above the adjacent ground.

ment, to the construction and maintenance of village roads, police duty, service to officials (inlanders), water supplies, and other works of public necessity to the village, and more especially to the construction of tertiary canals of irrigation systems, or of those serving areas of about 140 hectares, or less; and of all laterals and distributing canals and ditches, and the maintenance of minor irrigation works.

The residencies have special regulations relative to the time and service required. For service for the government compulsory labor varies from ten to twenty days, but is not required in all residencies. In the year 1906 the total number of natives subject to service was 3,456,611. The maximum number of day's labor available was 60,529,512, of which there was actually required only 13,960,754.

This service was distributed as follows:

Repairing and cleaning public roads.	3,051,089
Furnishing surfacing material.....	8,808,196
Repairing and maintaining irrigation works.....	2,101,469
Total.....	13,960,754

The above does not include the compulsory service rendered to the villages, public works, and officials.

Population.—The population of Java including the Island of Madoera has doubled during the past thirty-five years. Its annual increase is estimated at about 400,000.

The census of December, 1905, gives the following figures:

Europeans	64,917
Chinese	295,193
Arabs	19,148
Other Orientals, not inlanders	2,842
Inlanders and those equalized therewith	29,715,908
Total	30,098,008
Island of Madoera, total	1,493,289
Total population, Java	28,604,719

Present Government and its Divisions.—The central government is composed of the Governor-General, with an advisory board called the "Indian council," comprising five members, and the following administrative bureaus or departments: (1) Bureau of justice, (2) bureau of finance, (3) bureau of interior, (4) bureau of public instruction, public worship, and industry, (5) bureau of public works, (6) bureau of agriculture, (7) bureau of government occupations, (8) bureau of navy, (9) bureau of military.

The island is divided into sixteen residencies, or provinces, with an officer in charge of each called a "resident." He has a large control of all governmental operations in his territory. He is aided by an assistant resident, by a technical corps, by the necessary number of comptrollers, and, also, by a native regent, who directs the work of the native chiefs or village headmen. The policy is to govern the people directly by their own chiefs as far as possible.

The members of the Indian council are appointed by the Queen upon the recommendation of the Governor-General. The director of the interior recommends, and the governor-general appoints the residents and native regents.

The government owns practically all lands and water rights; it directly controls the railroads, the telegraph, the telephones, the trade in opium, the operation of pawn shops and loans, the mining of tin, etc., and is now proposing either to secure control of further industries, or else to enter into a new policy of restricting governmental operations to the necessary functions of a monarchy in its furtherance of the welfare of the people.

Considering their importance to public works projects, mention should be made of the landed estates created about a century ago, and which comprise an area of from about 100 to 300,000 bouws each (71 to 213,000 hectares). The conditions of these estates vary: some of them are almost separate governments, paying no taxes, possessing all water rights, and being entitled to the customary rights of compulsory labor. Over all, however, the government has the right of eminent domain, and the inhabitants may remove to other residencies in case the owners of these estates oppress them.

The government is proposing, when funds are available, to purchase these estates, and to remove these minor and semi-separate governments. It will, also, to-day, grant long period leases of land for useful purposes in almost unlimited areas, to European individuals or corporations, at an annual rental ranging usually from 1 guilder to 5 guilders per bouw (₱1.12 to ₱5.60 per hectare), provided the land so leased is not needed by the people.

The subject of land taxes in Java and the policy of the government to provide reimbursements for expenditures on irrigation projects, will be of special interest in connection with the present attitude of the people of the Philippine Islands toward this subject.

The government of Java is monarchial; all proprietary rights to land and water are vested in the government, and the extensive laws relative to such properties in a democratic form of government are almost entirely lacking. The inlanders and those equalized with them, possess ancient customary rights to the use of the land and water. These rights can not be sold except to other inlanders, and if held by a member of a community, such customary rights must revert to the community, in case the owner of such customary right dies or removes to another locality.

Central Java is occupied mainly by communities, and the remainder of the island by private owners. In a community the land is allotted to the members thereof every five or ten years by the head of the village. The government is continually increasing its knowledge of land products. A cadastral and soil survey has been in progress for a few years, but the expense, 1 to 2.50 florins per bouw (₱1.12 to ₱2.80 per hectare) is too great to permit this work to be vigorously prosecuted.

The welfare of the people and their ability to pay the land tax are given careful consideration. The tax is based upon the gross products of the land, and is to-day considered low. At present the tax is based in part upon a topographical survey under execution by the military for all other branches of the government. The cost of these surveys averages about one-half guilder per bouw (₱0.56 per hectare).

For the past ten years the annual value of the land tax has been about 8,000,000 florins (₱14,400,000). Each owner is advised regarding the amount of his tax, and failures to pay are rare. The taxes are reapportioned every ten years. New regulations have been issued recently and a reapportioning of the tax is in progress. The land-rent staff comprises men of high ability and long service. It is composed of an inspector and his adjutant and a few comptrollers, together with some inlander officials. The following notes show the essential features in levying this important tax, and are based upon the revised regulations enacted July 2, 1907, Ordinance No. 277.

(*a*) Exemptions from the tax are: Newly fallowed rice fields for the first three years; communal pastures; sacred grounds; and grounds occupied by works of service to the public. The land tax is levied on rice fields, and on dry grounds, ponds, and nipa marshes.

(*b*) Special instructions are given for measuring the parcels of land subject to the land tax, and for grouping them and measuring their productiveness. This work is done by the land-rent staff in deliberation with native chiefs, and the customary rights and practices of the inhabitants are considered.

(*c*) The productiveness of groups is determined upon small trial fields with normal crops. The land rent is a minimum of 8 per cent and a maximum of 20 per cent of the gross market value of the crops. Special conditions exist modifying and increasing these percentages.

(*d*) For dry lands, ponds, and nipa marshes, the estimation of the land rent shall not be less than 0.25 florin or more than 20 florins per bouw (₱0.28 to ₱22.40 per hectare).

(*e*) Records are compiled and filed, and the land rent once fixed remains in force for a period of ten years.

(*f*) The regulations cover private or individual property and communal property with permanent and nonpermanent shares, and provide for the correction of errors and the addition of new parcels and groups, and, also, provide for a discharge of the land rent due in case of noncultivation, bad crops, or expensive improvement of lands.

(*g*) These regulations are not applicable to ground planted, either by free or compulsory labor, with coffee, the production of which is delivered to the government.

(*h*) The head of the provincial government fixes the rules for the collection of the land rent, which is collected by the head of the village or hamlet, who receives 8 per cent therefor.

(*i*) Specific regulations are also proposed for measuring of lands subject to land rent.

(*j*) The inspector of rural revenues and compulsory labor determines the districts on which data must be collected. Charts to a scale of 1 to 5,000 of 1 to 2,500 must be prepared or revised by the land rent surveying staff of the topographical division.

(*k*) The special registers for each hamlet record the measurements, boundaries, and area of each parcel, and the class to which it belongs, including lands not subject to land rents. Detailed instructions are given regarding the objects to be shown on the map, conventional signs, etc., also computations of areas, and the organization, duties and responsibilities of the various parties concerned.

(*l*) Additional to the minute plans, the hamlet charts and the map of the district, a monograph is prepared, furnishing data on condition, use, and improvement of agricultural grounds, general economic conditions, population, market prices, and the losses, resources, and revenues of the farmers, and on the status of the land rates.

(*m*) Owners or holders of individual rights may lease the use of this land for short periods, but regardless of such leases the owner is responsible for the payment of the land tax.

Detailed regulations control the leasing of land by the government, or by inlanders, to private parties or to corporations. Those lands not of use to the inlander are leased to residents of Holland, or to European residents of Netherlands India, or to companies incorporated in Holland or India for long periods up to seventy-five years. Several thousand such leases exist; they are in parcels of 500 bouws (355 hectares) or less, but several parcels may be incorporated in one plantation, some of which aggregate 12,000 bouws (8,520 hectares) or more. The lease is offered in competition to the bidder offering the highest annual land rent per bouw. The successful bidder must pay the cost of measuring and charting the land. The cultivation of the poppy and salt making are prohibited, and the cultivation of coffee adjacent to the coffee plantations of the government is restricted by definite regulations. Additional to the land tax, general taxes must also be paid on the net revenues of production, and on structures, as buildings, factories, etc. The land tax is not levied during the first ten years on these long lease plantations. Six hundred and twenty-one thousand seven hundred and four bouws (441,410 hectares) are so leased by the government, the principal productions of which are, coffee, tea, tobacco, cinchona, cocoa, pepper, rubber, etc. In general, areas so leased are not subject to irrigation. Inlanders, under similar regulations may lease to others for short periods only lands over which they hold customary rights. Several hundred such leases exist, which include the large sugar plantations of east Java.

The lessees are mainly Europeans and Chinese. The residencies under the control of the Sultans of Djokjakarta and Soerakarta, aggregating 9,295 square kilometers, are leased, also, largely to Europeans.

These particular lands sold by the government in the early part of the nineteenth century, or granted for service of special value to the government, are located mainly in the residencies of Batavia and Semerang; they are in area from a few bouws up to estates of 300,000 bouws (213,000 hectares). The aggregate area of these landed estates is 1,290,847 bouws (1,916,500 hectares).

Cultivated Area.—The total area of Java and Madoera is 131,000 square kilometers, or 13,000,000 hectares. Based upon cultivation this area may be classified as follows:

Character of lands.	Area. Bouws.	Hectares.
Owned by inlanders:		
Irrigated rice fields	1,826,754	1,296,995
Rice fields watered by rainfall only	1,044,668	741,715
Marshy rice fields	65,867	46,765
Nonirrigated lands (not including the village areas)	a1,276,272	906,153
Total	4,213,561	2,991,628
Other holdings:		
Lands occasionally cultivated	155,107	110,126
Government coffee plantations	b102,354	72,671
Government cinchona plantations	1,522	1,081
Government lands leased to planters	c621,704	441,410
Landed estates (old grants)	1,290,847	916,502
Total cultivated area	6,385,095	4,533,418

a These areas are estimates. Only those covered by the new surveys are accurate. It is stated that the irrigated areas may be increased 50 per cent, and that the dry land, including the village areas, may be increased by 100 per cent. Correcting the above figures on this basis will give 49.5 per cent of the total area under cultivation.

b These plantations are decreasing; they are operated by compulsory labor.

c Tea and coffee plantations aggregate 212,038 bouws, or about one-third of the area leased by the government.

Percentage of total area equals 34.6 per cent.



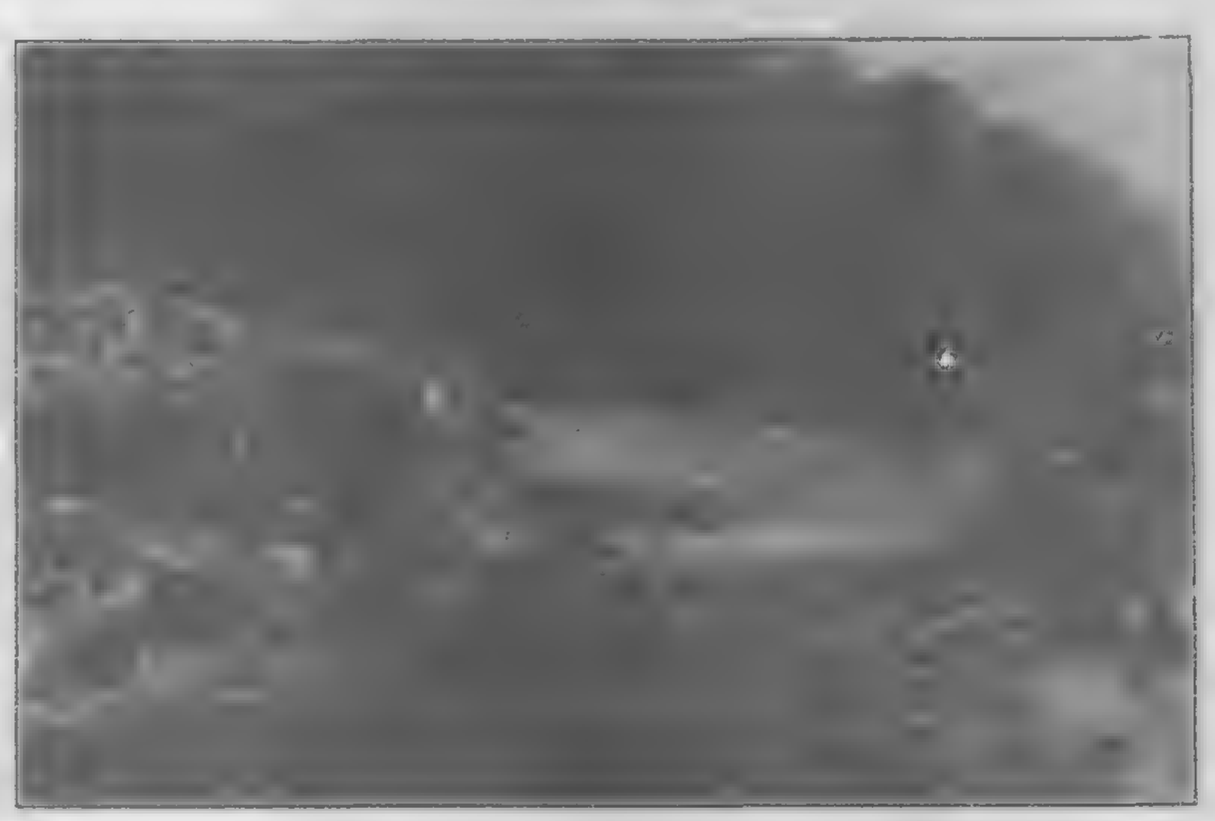
HEADWORKS AND FLOOD-DISCHARGE WEIRS FOR THE KALI MERIE—VIEW FROM BELOW.



HEADWORKS AND FLOOD-DISCHARGE WEIRS FOR THE KALI MERIE—VIEW FROM ABOVE.



MERILIP SHIP LOCKS AND DISCHARGE WEIRS—CONTROL WORKS FOR THE SOERABAJA RIVER, PROTECTING THE HARBOR.



DJANDJING CANAL (AND RIVER)—HEADWORKS NEARLY COMPLETED.
Note that crest of discharge weir is 0.60 meter higher near headworks.



MERILIP SHIP LOCKS AND DISCHARGE WEIRS—AFTER SUDDEN FLOOD HAD WASHED AWAY THE TEMPORARY LEVEE ON THE CREST OF THE DAM.



DJANDJING CANAL (AND RIVER)—FRONT VIEW OF INLET SLUICE GATES.

Bureau of Public Works.—The bureau of public works was organized in 1854. The present organization of the bureau consists of the Director, who is the executive head, and who reports to the Governor-General.

This bureau was responsible until 1908 for the division of posts which was then placed in the newly created bureau of government occupations. It is also responsible for the division of railways which will be transferred during the present year to the same bureau, and for the division including general engineering works outside of Java, for the four districts into which Java is divided, for telegraph, telephones, public buildings, roads, bridges, steam boilers, harbors, river control, and irrigation.

The Director is assisted by seven head engineers; one of whom is in charge of the technical work outside of Java. Four head engineers are in charge of the four districts into which Java is divided, and two are in charge of technical work in the Batavia office, of which one has public buildings, roads, bridges and harbors, and the other, irrigation and river control. Approximately 100 engineers are authorized, of which 70 are available in the field.

The corps of engineers is European, and it is assisted by such architects (experienced constructors), surveyors, and other subordinates as the work may require. With few exceptions the clerical and drafting forces are inlanders. The engineers are divided into first, second, and third classes, and aspirant engineers, the mini-



DISCHARGE WORKS—THE DIVERTING OF THE KEPOELORNGEN RIVER INTO THE KALI KAMBING—FALL OF WATER, 10 METERS.

These works were constructed to prevent further erosion of the river bed and the destruction of irrigation canal headworks.



MOLEK CANAL—TAKEN FROM FIRST ABUTMENT.



DJANDJING CANAL (AND RIVER)—SECURING TOOLS AND MATERIAL DURING FLOOD; ALSO CASTING MATERIAL TO BE EXCAVATED INTO THE FLOOD.



TJIORDJOENG CANAL (NORTH BANTAM), SERVING 30,000 BOUWS.

Main channel completed, section repairing slides.



TJIORDJOENG CANAL—ENTRANCE TO THE SECOND SIPHON CARRYING THE IRRIGATION CANAL UNDER THE TJI ASEM.

mum salaries of which are, 700, 500, 350, and 250 florins per month respectively. The minimum period of service indicated by these classes is fourteen, eight, and two years, for the first, second, and third classes, respectively. Valuations and other requisites are liberal, and a pension is provided after twenty years of actual service, amounting to one-fourth of the highest pay earned, and to three-eighths if the service extends to thirty years.

Irrigation in Java has been practiced from time immemorial. The work consisted of a utilization and conservation of the rainfall and some diversion of water from the rivers; all structures were of a primitive and temporary type. The labor and material were furnished by the people. The government gave special attention to the development of agriculture early in the nineteenth century, and to propositions for extending irrigation works.

During the years 1845-1849, 622,000 florins (₱497,600) were expended on irrigation. The utility of the works accomplished is doubtful, and it is probable that the funds were expended by native chiefs and other officials for various other purposes as well as for those of irrigation. The number of technical men available was small; the investigation and preparation of plans was limited, and it was the exception when the works accomplished fulfilled the required conditions



CHONG WEIR (NEAR MERILIP)—SHIP SHUTTERS IN DRY DOCK FOR REPAIRS
first and tenth shutters are always in place; the remainder are used only during low water.



THE TJIOEDJOENG HEADWORKS UNDER CONSTRUCTION—"WELL" FOUNDATIONS FOR LEFT ABUTMENT



OEDJOENG CANAL—MAIN CANAL COMPLETED—SECTION REPAIRING A HEAVY SLIDE



SENGHONG WEIR (NEAR MERILIP)—PORRONG RIVER, DELTAIC DISCHARGE OF THE BRANTAS IMMEDIATELY BELOW THE SENGHONG WEIR—SHIP LOCKS ON RIGHT



TJIOEDJOENG CANAL—ROCK CUT AT KILOMETER 11



SENGHONG WEIR (NEAR MERILIP)—SHIP SHUTTERS IN BACKGROUND

During the early history of the bureau, and up to 1872, the various irrigation projects consisted mainly of changing native types of structures to permanent structures. In 1872 a general survey of the Demak project was authorized. This was the first projects receiving thorough technical consideration.

In 1885 new instructions were issued, and a special corps of engineers, under the bureau of public works whose duties were to be confined to irrigation projects only, was authorized. These instructions required specific attention

(1) The improvement of all insufficient and unsatisfactory works.

(2) The control and supervision of irrigated lands dependent upon the rainfall and where the population was dense.

(3) The investigation of irrigation in areas slightly populated.

While these instructions did not authorize investigations of new irrigation projects, the number of engineers continued insufficient to attain the desired results. The preparation of topographical maps was, however, commenced, and the collection of hydraulic data started.

In 1890 these investigations had been sufficiently advanced so that the director of public works prepared a report on sixteen important projects, for which the estimated expense of construction, including 9,000,000 florins (₱7,200,000) already expended, aggregated about 45,000,000 florins (₱36,000,000). The cost of investigations up to 1889 had been 380,000 florins (₱304,000) for these sixteen projects, and it was estimated that 588,000 florins (₱470,400) would be required to complete the investigations. These estimates did not include the tertiary canals, serving areas of from 150 to

250 bouws (106 to 177 hectares) which were to be built by the inhabitants, without expense to the government. This report recommending that the 16 projects be executed was submitted to the Governor-General, by whom it was approved and the works authorized. These projects are in part completed today; one extension project has been indefinitely abandoned, and several additional projects have also been authorized and completed, or are in progress.

Surveys and investigations estimated to cost not more than 5,000 florins (₱4,000) in any one year, are authorized by the Director, subject to the approval of the Governor-General. Larger expenditures are authorized by the Governor-General. Projects estimated to cost more than half a million guilders (₱400,000) are usually referred for authorization by the Governor-General to the home government.

New irrigation projects may originate with the resident of a residency or province, or with planters, or inlanders who would be benefited thereby. Usually requests for new projects are taken under consideration by a special commission composed of a representative from the departments or bureaus of the interior, of agriculture, and of public works. The benefits to be derived by the proposed works are carefully considered and the commission usually visits the area concerned, reporting thereon to the Governor-General, who, if the project is approved, authorizes the necessary action. The engineers in charge of the irrigation districts in which the proposed projects are located make the required investigations, and construct the works by day labor if the projects are small. Special engineers are assigned to the larger projects.

Irrigation districts are determined by the drainage area of the important rivers, and are independent of the political boundaries. As a result, irrigation districts may include several residencies. In theory the irrigation engineer is also subject to the orders of the resident as well as to the bureau of public works. With the centralization of government so characteristic of Java this duplication of superior officials causes no inconvenience.

For the small projects, and where hydraulic data on streams are known, one or two years is usually required to prepare complete reports; five years is regarded as the minimum period for hydraulic data on which designs are based; and for the important projects a period of ten years is regarded as necessary for the collection of reliable data on rainfall, stream discharges, floods, etc.

Works are generally divided into protective works, and productive works; the latter should give an increased revenue to the government through an increase in the land taxes aggregating at least 6 per cent of the cost of the irrigation works. If the revenues are measured only by the increase in land taxes, practically none of the irrigation projects in Java are productive. A consideration of the question of revenue does not, however, affect the preparation of the project or the recommendations of the engineers. When the project has been authorized, the head irrigation engineer is responsible for the execution of the work. Under approval of the Governor-General compulsory labor in exceptional cases may be required, if sufficient free labor does not present itself. In case compulsory labor is required, an equitable rate of wage is paid. The construction of headworks and the main and secondary canals are under the immediate supervision of the engineer. The construction of the tertiary canals, or those serving approximately 140 hectares of land, and all lateral and distributing canals therefrom, are executed by compulsory labor without expense to the government, under the native officials of the village in which reside the owners of the land benefited, but under such supervision of the irrigation engineer as may be necessary. The engineer's duties, in connection with the distribution of the water from the tertiary canals, is advisory only, unless disputes arise, in which case his decisions are final. An observance of the customary right of the inlander is rigidly followed.

Practically no construction work is executed by contract. Also there are no laws having special reference to irrigation. The procedure depends upon local conditions, and any executive regulations are subject to change by the director of public works, or by the head engineer in charge of the division of irrigation. The government holds proprietary rights over all lands and waters. Prior use of water on land is a property right to the party or community holding the customary rights to the use of the land, provided such use is necessary and practised with economy. The policy of the government is that the water shall be used for the benefit of the largest number of people, and that it shall be equitably distributed to the crops; that all cultivated property shall pay as much as possible, and that improvements in irrigation are a duty of the state, and should be executed as rapidly as available funds will permit, on account of the increased area placed under cultivation, and the increase in public and private property values. Further improvements also decrease the danger of famine or shortage of food stuffs, and only incidentally are they constructed, on account of the increased revenue derivable from the land taxes. It also holds that the larger plantations should voluntarily pay for irrigation projects proportional to the benefit received. Some of the larger estates are paying nothing; considerable amounts are contributed by others, and a proposed law requiring an equitable payment from these estates is now under consideration. The government is evidently proposing to place existing irrigation works on a paying basis, and to make new projects productive as fully as possible. Experience has proven that under the present policy the increased revenue derived from land taxes does not reimburse the government for the cost of irrigation works. Additional revenues are derived from a general tax of about 5 per cent on the net receipts of the larger plantations.



KEDOENG TJALOCK CANAL HEADWORKS, MARMOIO RIVER—WORKS NEARLY COMPLETED



SENGHONG WEIR (NEAR MERILIP)—CONTROL OF THE BRANTAS AND PROTECTION WORKS FOR SOERABAJA HARBOR, 50 KILOMETERS BELOW THIS PLACE

Mangetan Canal, center (30,000 bouws); Porrong Canal, left (18,000 bouws.)

The basis of the land tax is the value of the products and the ability of the native landholder to pay. Irrigation may double the tax levied prior to construction. The tax varies from 5 per cent to 20 per cent of the value of the crops raised, and in exceptional cases to 25 per cent. The usual value of the tax after irrigation works have been in operation for three years, is from 7 per cent to 15 per cent of the value of the crops raised.

Regulations relative to irrigation and to the distribution of water differ in the various residencies. The following notes relate to the Pemali irrigation system. The entire area is about 45,000 bouws (31,950 hectares). It is divided into tertiary units of areas varying from 150 to 250 bouws (106 to 177 hectares) each, served by a tertiary canal or ditch. The size of these units is considered of importance in the economical and advantageous distribution of water, which is the duty of a native village official specially appointed by the rice cultivators.

These units for the Pemali system are divided into five groups, irregularly arranged so that portions of the entire area are subject to identical conditions. The first unit of each group is heavily watered from October 15 to November 1, and the second unit for the following 15 days until the entire area is supplied. The distribution of water from October 15 to November 1 alternates so that each set of units during a five year period receives the advantages of the first watering. The units first watered produce crops varying from 50 per cent to 100 per cent larger than those last to be watered, on account of which not more than three groups should be used if practicable.

The accompanying illustrations are published by courtesy of the Director Bureau of Public Works, Philippine Islands.

THE SHANGHAI GAS WORKS

GAS VERSUS ELECTRICITY IN SHANGHAI

In the June number of The Far Eastern Review, a short sketch of the operations of the Shanghai Gas Company was included in an article on the Public Works and Public Service corporations of the Settlement. Unfortunately at that time we were unable to secure photographs to give a fuller idea of the extent of these works, which merit a place in the front ranks of Far Eastern industries and stock companies, and whose growth from a small beginning to its present prominence has kept pace with, and been typical of, the general advance of the town. From an insignificant plant or small pretensions to probably the largest outside Europe or America, is a record which speaks volumes not only for the business management and foresight of the various Boards of Directors, but throws a strong sidelight on the progress and development of the small treaty port to the important cosmopolitan city of today.

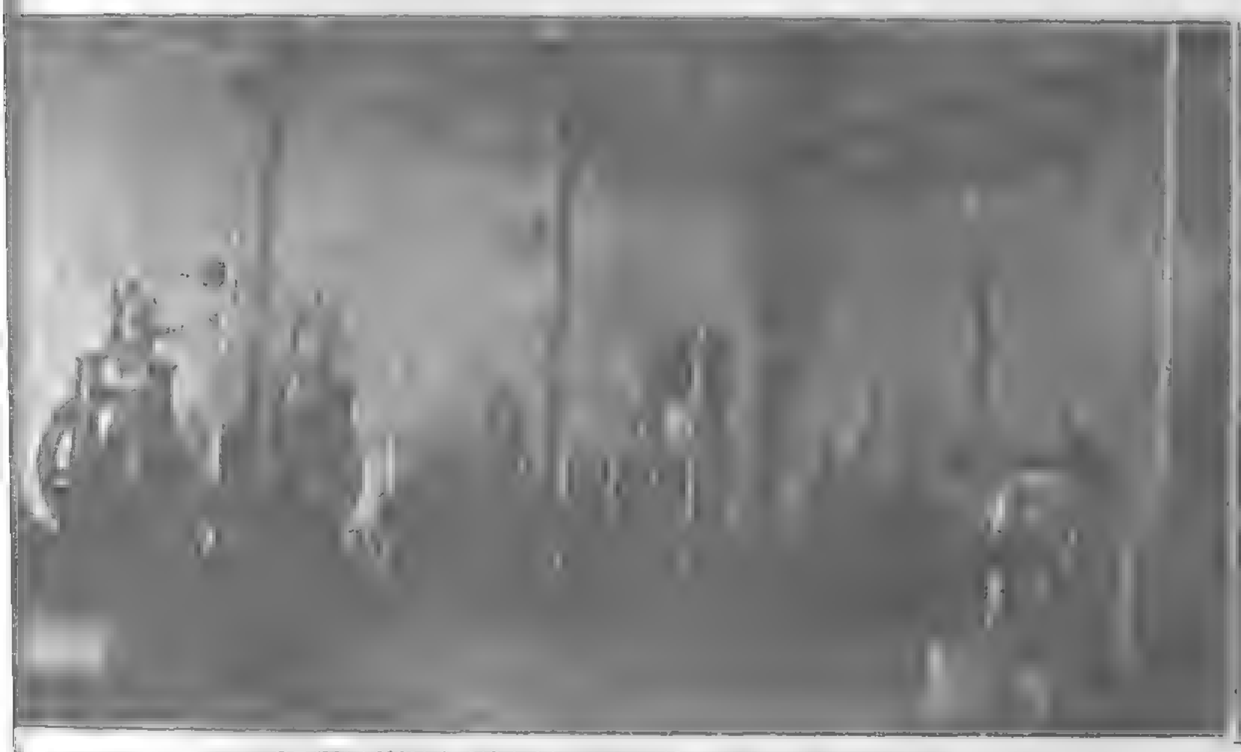
In the days when the foreigner was still struggling for a firm foothold in the almost forbidden Empire of Heaven, back 55 years, to 1864, the Shanghai Gas Company was floated, with a capital of Taels 121,350, to furnish gas to the British and so-called American Concessions. When the plant was erected and the first gas turned into the mains, only 58 consumers were supplied. The original plant was located on Hankow Road, but was shortly afterwards moved to its present central locaiton on Tibet Road. The selection of this site, at that time on the limits of the Settlement, is a tribute to the judgment of the original directors who foresaw the growth of the Settlement and built their plans accordingly. Now



GENERATOR HOUSE. WATER GAS PLANT



VIEW OF WORKS FROM SOOCHOW CREEK. COAL GAS PLANT



OPERATING FLOOR. WATER GAS PLANT



VIEW OF WORKS, COAL GAS PLANT



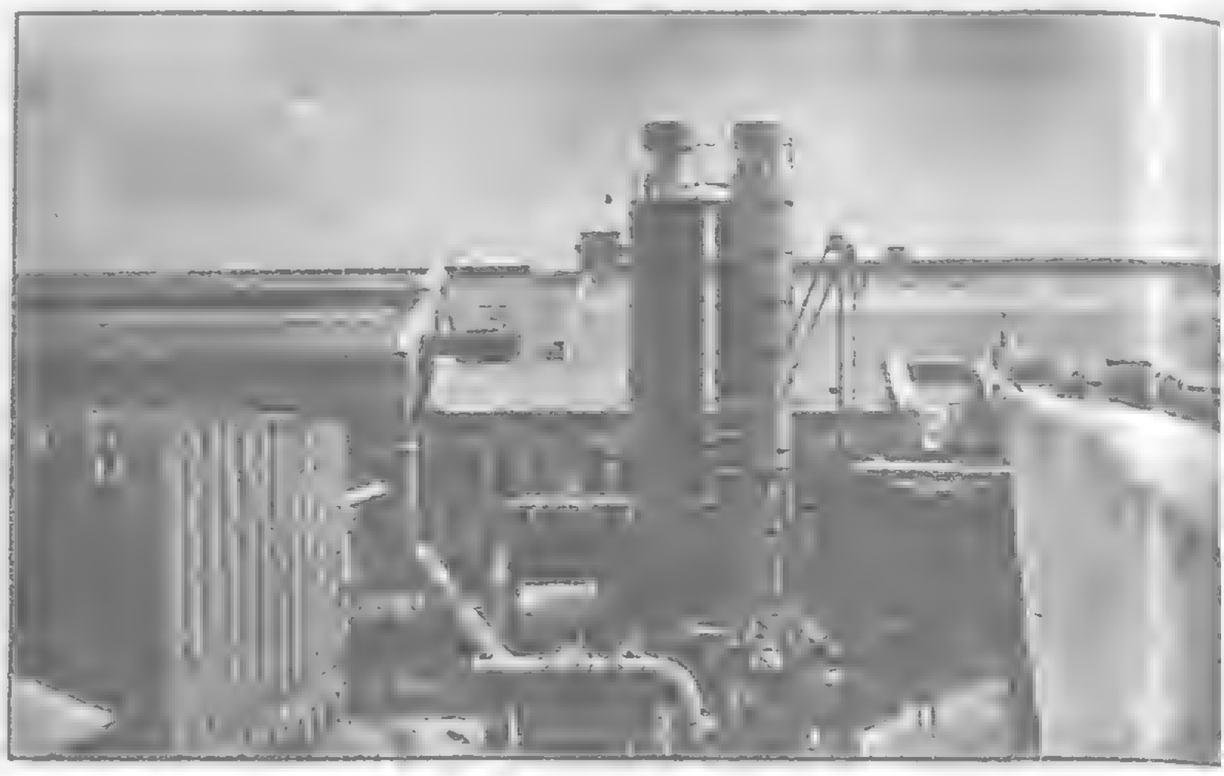
INTERIOR OF PUMP ROOM WATER GAS PLANT



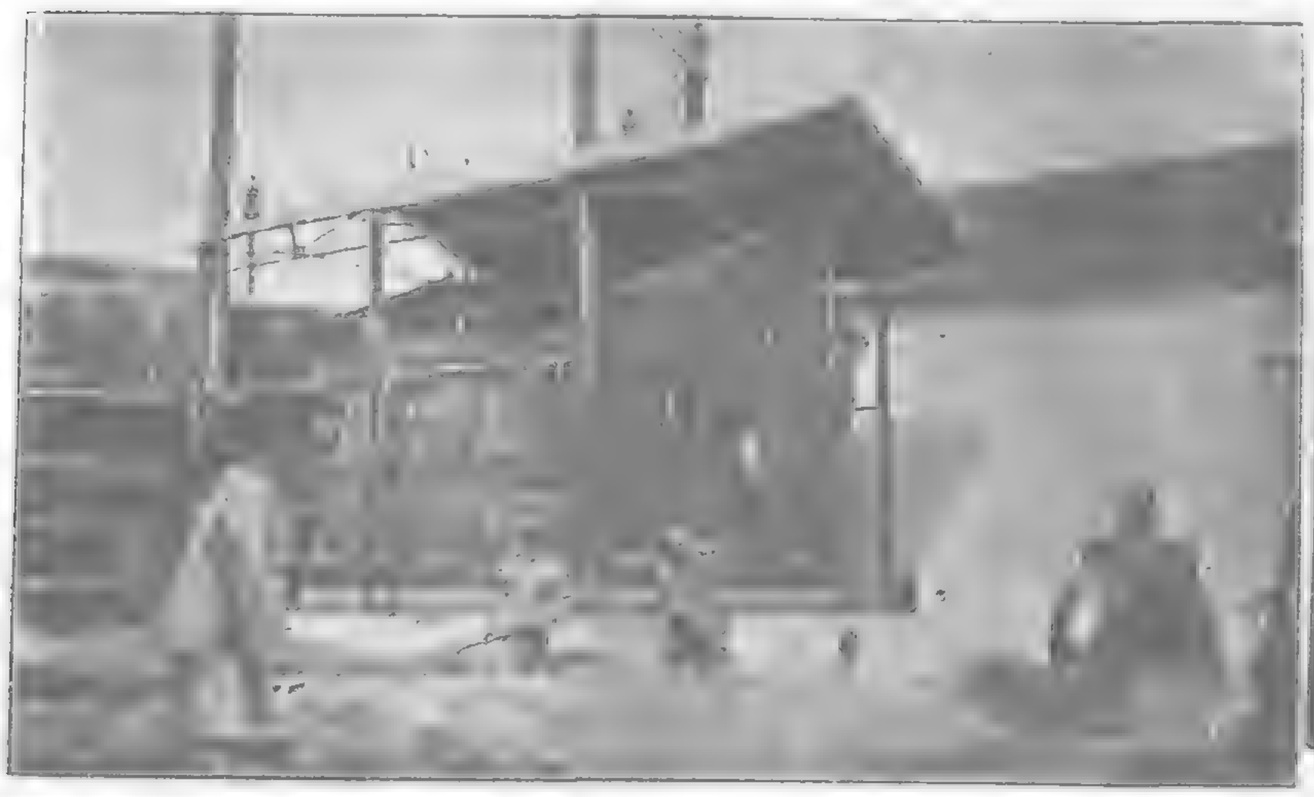
WATER GAS PURIFIER AND METER HOUSE, ALSO TAR AND LIQUOR PUMP ROOM



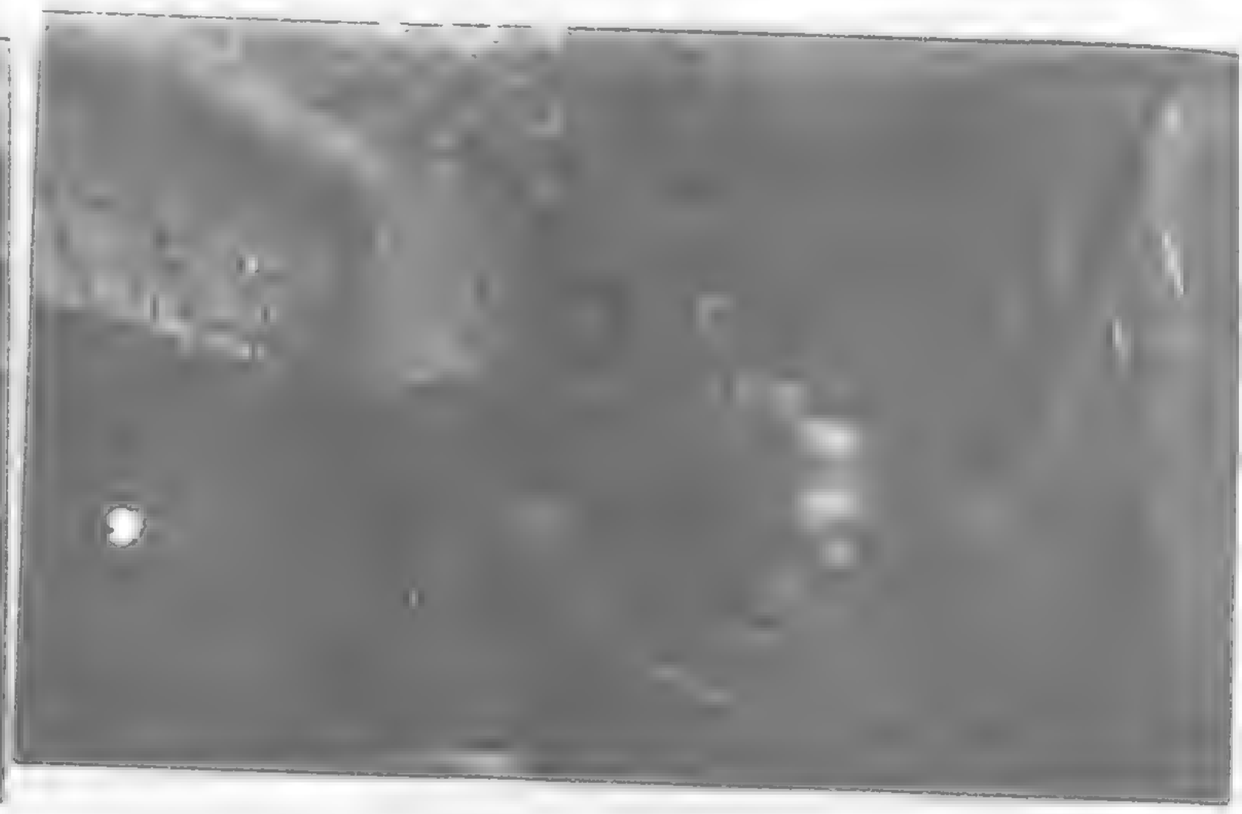
COAL GAS PURIFYING PLANT



INTERIOR OF RETORT HOUSE, SHOWING STOKING-MACHINE

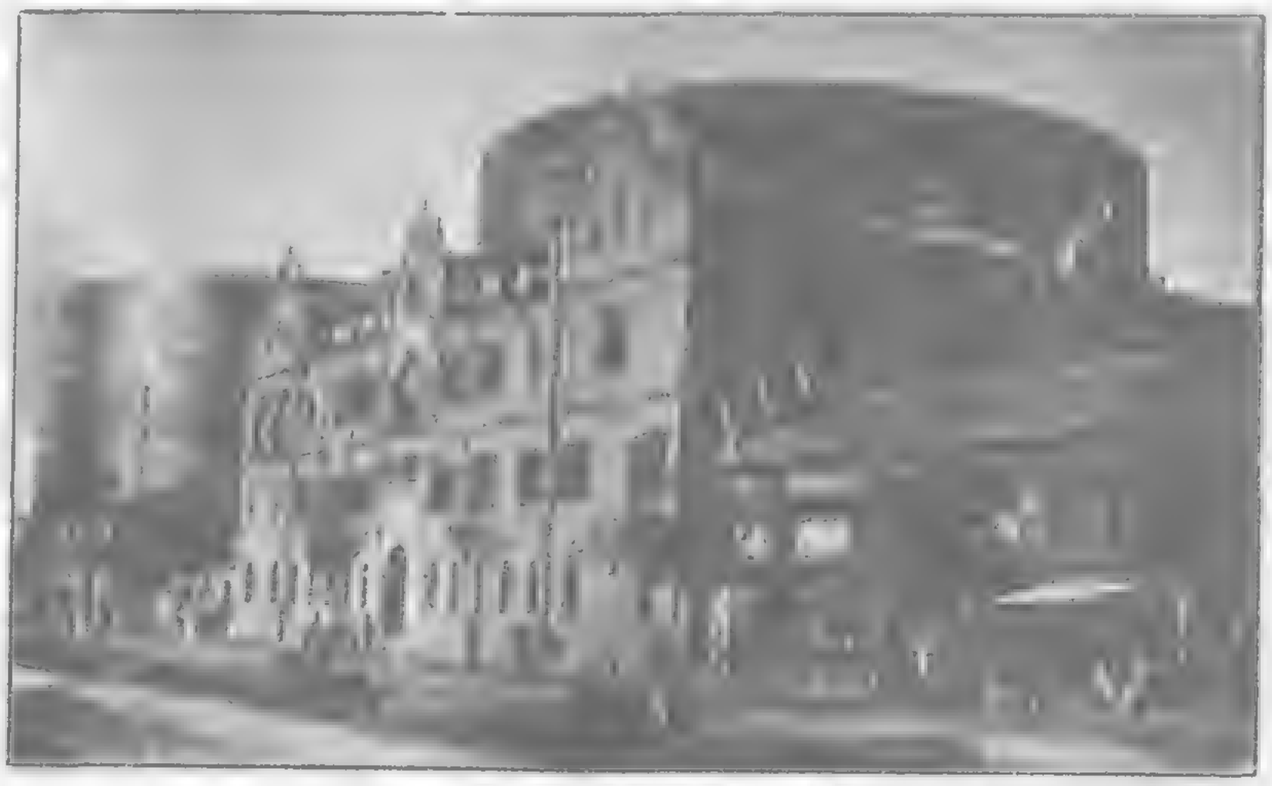


STATION COAL GAS METER





ELEVATOR TO RAISE COAL TO HOPPER WHICH FEEDS THE CHARGING MACHINES



OFFICES AND GAS HOLDERS

the site is in a most desirable and central location on a navigable creek, which permits the water borne coal barges to be unloaded at the works, a great economy in the running expense. The original supply of coal came from Australia. The plant struggled along for over twenty years on a small basis, handicapped by the slow development of the port, and the inherent prejudice of the natives to such foreign innovations which to them were possessed of the devil. In 1889 negotiations were successfully concluded for the purchase of the small opposition plant supplying the French Concession, which marks the real growth of the Works. At that time 237,000 cubic feet of gas represented the maximum daily output. Today, twenty years later, the Works have a capacity of over 3,700,000 feet daily, with an average daily paid consumption of over 1,350,000 feet. The consumption in recent years has advanced rapidly, trebling in eight years, necessitating the installation of a new plant capable of taking care of future requirements for some years to come. The extensions covering the building of a new holder, retort house, condensers, washers and scrubbers, and labor saving devices were commenced three years ago, and only recently completed. The increase of consumption in 1907 over the previous year was 9.59 per cent, and in 1908, 5.77 or over 15 per cent in two years. At this ratio the present capacity of the plant will be taxed to its full

limit in the next ten years. It is hardly to be expected that the rapid increase in the last decade of nearly 300 per cent, which is probably a record, can be sustained in the future owing to the keen competition of the electrical plants controlled by the municipal authorities. The present price of gas for lighting is $1.70 Mexican per m. with 5% discount to consumers of 20,000 cu. feet or more per month. For power, heating and cooking the price is $1.50 Mex per m. and the gas cooking ranges and heaters are loaned free, and gas engines, geysers and High Power lamps are furnished consumers at a nominal monthly rental. The Municipality enjoys a discount of 25% on current rates for public lighting, which netted them Taels 6,000 the last fiscal year. Electrical competition has induced the Gas Company to undertake the maintenance of incandescent burners at the low rate of 20 cents Mexican per month, keeping the burners in good condition and renewing mantles and chimneys whenever necessary. The number of consumers is over 8000 and it is a keen struggle between the gas works and municipal electrical plant to secure new business.

The leading streets are largely lighted by electricity as the municipal authorities naturally desire to show results consistent with low charges and a legitimate profit on their own undertaking. The Gas Company has, however, been awarded the contract for some 700 incandescent gas lamps in the International Settlement and about 90 in the neighbouring French Concession. The question of economy as between incandescent gas lamps and electrical lamps of the same candle power has engaged the attention of experts in all parts of the world, and both methods have many partisans. The merits of either system are based on initial cost and maintenance. In Shanghai, the matter has assumed importance to the general public or ratepayers, owing to the adoption of the metallic filament lamps in place of the incandescent gas lamps for street lighting.

The action of the municipal authorities has created a keen discussion as to the general relative merits of the competing systems, the pros and cons of which have been set forth by letters published in the Municipal Gazette. The Gas Company has submitted a proposal to the Council to adopt a new 60 candle power incandescent gas burner specially made to compete with a similar power metallic filament lamp, and offered to light, clean and maintain the lamp at a rate of $1.75 Mexican per month net, against a charge of $3.00 Mexican for a 60 c. p. metallic filament lamp. On the face of the proposition the Gas Company's proposal would seem to be for the benefit of the taxpayer. This proposal brought out some interesting replies from the Municipal Electrical Engineer, and the Board, who refused to adopt any general measures for utilizing gas in preference to electricity for street lighting. The Board pointed out that the $3.00 Mexican charged per month for the metallic filament lamp was inclusive of initial costs of lamps, standards current, maintenance etc., while the Gas Company's price was exclusive of these costs, and "recognized that gas lighting has recently shown an advance in efficiency, while remaining at a price lower than electricity. At the same time however it is not considered that such improvement would justify the Council in adopting it in preference to electricity, although the difference in cost in favor of the former is carefully borne in mind."

The letter then follows with a lengthy argument in favor of the electric light, which is too lengthy to quote in full, and in defense of the municipal plant, in whose success, the ratepayers have an interest, which the Council is bound to protect and further.

The cost of the metallic filament lamp, or its undoubted illuminating qualities, does not enter into, or is it pertinent to such a discussion, as it is far below the cost of a gas lamp of equal illuminating power. The $1.25 excess charge for its use represents therefore a question of maintenance, an item subject to considerable elasticity, varying with the efficiency of the management of the plant.

The Board naturally defends its own actions and the ratepayers' property and resents any inference that the latter is not receiving a fair deal from the electrical monopoly. The Gas Company is seeking to enlarge its field of business, and the resultant competition is a good one for the consumer. A combination inimical to the public is here impossible, and a constant betterment of service at the lowest rates insured the public. A fair compromise on lighting should be arrived at as there is sufficient scope in the Settlement for both systems. A complete monopoly by either the Gas or Electrical undertakings is undesirable, especially the latter, for the tendency of all official monopolies is towards impairment of service.

PHILIPPINE CIGAR SHIPMENT

SHIPMENTS OF CIGARS TO THE U. S. OF AMERICA. DURING OCTOBER 1909.

Exporters.	*Cases.*	*Kilos.*
Messrs. Castle Bros.-Wolf & Sons	457	55.655
" Meerkamp & Co., (La Maria Cristina)	148	13,684
" Compañía Gral. de Tabacos	140	22,967
" Baer Senior & Co.'s Succrs. (La Yebana)	90	13,337
" Walter E. Olsen & Co.	73	10,439
" Philippine Co. Ltd. (La Comercial)	71	9,465
" Germann & Co. Ltd. (Helios)	32	3,833
" J. Sta. Marina, (La Insular)	18	2,196
" La Germinal	15	2,882
" Chion Yu Nam	13	1,728
" Haddix & Kings	10	1,657
" Perez Hermanos	10	1,529
" Katubusan	10	1,100
" W. H. Anderson & Co.	8	1,380
" Philippine Products Co.	5	833
" Macondray & Co.	5	544
" Connell Bros.	1	145
Mr. F. Kuttner	1	88½
TOTAL	1107	143,462½

In all for the month approximately 10,000,000 cigars making in all to date under free trade about 17,000,000 cigars.

SHIPMENTS OF CIGARS TO THE U. S. OF AMERICA. DURING NOVEMBER 1909

Exporters.	*Cases.*	*Kilos.*
Messrs. Compañía Gral. de Tabacos	304	36227
" Castle Bros.-Wolf & Sons	262	32069
" Baer Senior & Co.'s Succrs.	129	19,853
" Walter E. Olsen & Co.	93	12,509
" Germann & Co., Ltd.	46	4,961½
" Meerkamp & Co.	46	3,590
" La Insular	34	3,249
" Philippine Co., Ltd.	33	4,822
" La Germinal	22	3,946
" Kuenzle & Streiff	16	2,397
" Chiong Yu Nam	14	2,348
" La Cibeles	6	708
" La Alejandria	4	590
" Manila Warehouse Co.	3	455
" Connell Bros.	1	163
" Sullivan & Francis	1	157
TOTAL	1014	128,044½

Approximately 10,000,000 for the month and 27,000,000 to date under provisions of the Payne Bill.

PHILIPPINE POLICY OF CONSERVATION OF NATURAL RESOURCES

No question of public policy within recent years has so attracted the attention of the great body of the American people as the "Conservation of the Natural Resources," which means first, the putting of the land, waters, timber and minerals of the nation to their best use for all the people, and, second, the assurance of a continuous supply for the future. It is only within the present decade, and almost within the past five years that public sentiment has recognized that the real prosperity of the United States rests primarily on its natural resources, and that present prosperity can not endure unless steps are taken for keeping up the fertility of the soil, providing for a regular and adequate supply of timber and minerals and protecting the water-rights on the public domain from ruinous exploitation. Practically all of the known mineral deposits and all of the agricultural land in the United States is in private ownership; consequently the government has laid principal stress upon the protection and proper use of the timber and water on what remains of the once vast public domain west of the Mississippi. Thus under the policies inaugurated by former President Roosevelt and continued by President Taft, forest reserves, or "National Forests," are maintained in areas which are unsuited for agriculture but well adapted for producing the timber which is so essential to the prosperity of the nation. In many of these public reserves are valuable sites for water power, and the people's interest in them is looked after by careful government regulation, so as to prevent their falling permanently into the hands of speculators or trusts.

Unfortunately, when the people of the United States first began to appreciate the value of their public resources, and the ruin that must inevitably follow their exhaustion, most of the timber land had passed into private ownership and had been exploited ruthlessly for present gain, without giving a thought to the future needs of the country. Consequently all the government can do in such cases is to try to induce private owners to handle their timber, water-power, and minerals in a more conservative manner, and to this end it assists them in adopting proper methods and shows them the increased profits which will ensue in the long run. Federal and state agricultural departments, bureaus of forestry, geological surveys, experiment stations, etc., all assist in this work; but the results, while encouraging, are by no means as good as would have been secured had a conservation policy been adopted when the country was younger. In spite of the publicly owned timber on the National Forests, by far the greater per cent of the timber of the United States is wholly outside of government control; and so all the people can do at present is to make the best of a rather bad situation and to put what timber is left to its best use.

Fortunately, the Philippines are much better situated, for most of the public land is under the control of the Insular Government and consequently it can take the necessary provisions to insure each national resource being put to its best use for all the people. Mineral deposits, and land suited for agriculture, is turned over to companies or private individuals under regulations which do not hamper the proper use or ownership of the land but also protect the people's rights. Non-mineral land, which is also unfit for agriculture but capable of producing good timber, is so administered as both to encourage the cutting and sale of mature timber, ready for the market and also to insure a perpetual supply for the future.

—*Bulletin Forestry Bureau.*

F. M. S. TIN OUTPUT, OCTOBER

	Piculs.
Belat	520
Bruang	219
Bruseh	220
Gopeng	605
Kanaboi	319
Kinta	530
Kuantan	60
Lahat	805
New Gopeng	190
Pahang Consolidated	1300
Rambutan	440
Redhills	142
Royal Johore	125
Salak South	241
Sempam	....
Serendah	607
Tekka	675
Tronoh	3826

FAR EASTERN COMPANY REPORTS

THE SIAM COMMERCIAL BANK, LTD.—The directors report showed a balance of Ticals 250,365 to the credit of profit and loss and their recommendation as to distribution was approved at the regular meeting as follows:

To reserve fund Tcs. 22,356.12; to special reserve Tcs. 75,000; dividend at 6% Tcs. 90,000; directors' fees Tcs. 6,310.25; bonus to staff Tcs. 5,211.15; remaining to carry forward Tcs. 51,487.48.

PERAK CULTIVATION COMPANY, LTD.—This company paid a final dividend of 20% making in all 27% for the year ended August 31st, 1909.

THE SIAMESE TRAMWAY COMPANY, LTD.—The net profit for the half year ended June 30th amounted to Ticals 30,460 which amount was considered about sufficient to cover depreciation for the term. No dividend was declared in consequence.

ANGLO-MALAY RUBBER COMPANY, LTD.—This company recently declared an interim dividend of 25% for 1909 making in all for the four years 93% return to the investors.

INCH KENNETH COMPANY.—This company declared a dividend of 5% and carried forward £500 after adding £2,500 to the reserve.

SUNGEI KAPAR RUBBER CO., LTD.—An interim dividend of 7.5% was declared in October.

THE PATALING RUBBER ESTATES SYNDICATE, LTD.—This company paid another interim dividend of 25% in November making to date 50% for the year 1909.

THE KINTA TIN MINES, LTD.—This company has paid another dividend of one shilling per share.

KLANANG PRODUCE COMPANY, LTD.—This company paid a dividend of 10% for the six months ended June 30th, 1909.

KALUMPONG RUBBER CO., LTD.—This company declared a dividend equal to 16% for the year ended August 31st, 1909.

PLANTERS' STORES AND AGENCY COMPANY, LTD.—This company paid a dividend of 12.5% for the year and carried forward £15,357.

THE PERAK SUGAR CULTIVATION COMPANY, LTD.—The balance to the credit of profit and loss for the year ended August 31st, 1909, amounted to Tls. 103,748.75 out of which a dividend equal to 20% was paid and the balance, with the exception of Tls. 6,302.87 carried forward, included Tls. 20,000 for estate development fund and the balance charged to depreciation of plant

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THE INTERNATIONAL COTTON MANUFACTURING CO., LTD.—The balance to the credit of profit and loss at the end of the year closed September 30th, 1909, amounted to Tls. 94,208.92 out of which a dividend of 10% was directed paid and the balance distributed as follows: written off furniture, plant, machinery, etc. Tls. 27,615 and carried forward Tls. 3,713.

THE EWO COTTON SPINNING AND WEAVING CO., LTD.—The profit for the year available for distribution amounted to Tls. 307,254 out of which a dividend of Tls. 11 per share was paid after placing Tls. 100,000 to equalization of dividend account, writing off depreciation and carrying forward Tls. 10,991.75

NIPPON YUSEN KAISHA.—For the half year ended a dividend of 10% was declared.

THE JAPAN-CHINA STEAMSHIP COMPANY.—The balance of Yen 268,944 to the credit of profit and loss was disposed of as follows:

A dividend of 5% per annum, bonuses Yen 10,000, reserve Yen 13,309, and a balance forward of Yen 43,075. The report covered the half year term ended September 30th, 1909.

THE CHINESE ENGINEERING AND MINING COMPANY, LIMITED.—The following accounts were presented at the annual meeting held in London on October 27th, 1909, and covering the year ended February 28th, 1909.

The net result of the year's transaction shows a balance to the credit of Profit and Loss Account of £204,868 made up as follows:

Net Profit, after providing for all charges in China		£244,000
Add Balance brought forward from last year	£ 3,929	
Cross receipts in London	968	
		4,897
Total		£248,897
Deduct Expenditure in Europe, Salaries, Stores, etc.	£ 7,023	
Debentures, Interest	23,988	
Debentures, Redemption	10,000	
Directors' Fees	3,018	
		44,029
Leaving a net balance of		£204,868
Which the Directors recommend should be appropriated as follows:—		
In placing to Reserve for Depreciation (making a total reserve of £215,000)	£	40,000
In paying a final dividend 1s. 6d. per share (free of tax) payable Nov. 2, 1909		75,000
Making a dividend of 15 per cent for the year with the interim dividend of 1s. 6d. per share paid on May 1, 1909		75,000
Directors' percentage on profits in accordance with the Articles of Association		6,094
Income tax		7,339
And carrying forward		1,435
		£204,868

The following is the report of the meeting which was held at Winchester House, Old Broad-street, E. C., Mr. W. F. Turner presiding. The Secretary (Mr. Alf. W. Berry) having read the notice of meeting and the auditors' report to the shareholders.

The Chairman said: You will, I think, agree that the results obtained during the year are satisfactory, especially in view of the fact that they have been achieved under unfavorable conditions of trade in China. The gross profit shown in the profit and loss account, £243,999, represents an increase in round figures of £20,000 over the preceding year. After the usual deductions, the available net profit of the year is £160,938, which is carried to the profit and loss account in the balance-sheet. The directors are glad to have the opportunity of increasing the amount put to reserve this year to £40,000 the same amount as was set aside two years ago. An interim dividend of 1s. 6d. per share was paid on May 1 last, amounting to £75,000. We propose to pay on Nov. 2 a further dividend of the same amount, free of income tax, making 15 per cent. for the year, and, after deducting the directors' percentage, there will be a balance of £1,435 to carry forward to the next year. In our report for last year it was stated that for some time a divergence of view had existed between the Chinese Government and the board of directors on the subject of the rights of the company in the Kaiping Basin, and that negotiations were proceeding with a view to arriving at an amicable settlement. These negotiations have not yet reached any result. From time to time objections have been made by the Chinese Government to the company's title to its property, but during the whole period of the company's existence no effective steps have been taken by them to establish their contention. Some time ago, however, the Chinese authorities granted to a Chinese company a mining concession within the area of the Kaiping Basin, which this company claims to be its exclusive right, and the Chinese company is now developing and equipping a colliery at Lanchow, which is some six miles from our principal colliery at Tongshan. This action on the part of the Chinese authorities constitutes a grave infraction of the rights and interests of this company. The board of directors are fully satisfied that the company's title to its properties is valid, and they applied to the British Government for its support. The negotiations, which had been suspended for some considerable time owing to the absence of one of the highest of the Chinese officials, have been resumed quite recently, and they are being conducted on behalf of the company with the assistance and support of the British Government. Such being the case, it is not possible for us to discuss the matter here. It is possible that the negotiations may be of a somewhat protracted nature, but in the meantime you may be sure that they are receiving the closest attention on your behalf both here and in China, and your directors place the fullest reliance on the British Government in the matters at issue. We drew your attention, on the occasion of the last meeting, to the fact that the total capital expenditure since the formation of the company amounted to £585,894, and as you have seen from the balance-sheet this has been increased during the year by a further sum of £47,330, about three-fourths of which consists of further expenditure in connection with the new electrical installations. Our total capital expenditure now amounts to £633,224. It is stated in the report that the output of coal for the past year shows an increase of 108,500 tons. The sales for the year amounted to 1,149,336 tons, being an increase of 190,027 tons both the output and sale being the largest attained in the history of the company. In this connection the agent and general manager tells us, as a result of the experience of the year, and of further investigation made by him, that he estimates the output capacity on a conservative basis as follows:—Taking 334 working days to the year, the output at Tongshan would be 2,500 tons per day, or 835,000 tons; at the north-west shaft, 500 tons per day, or 167,000 tons; and at Linsi, 2,800 tons per day, or 935,200 tons, making a grand total of 1,937,200 tons per annum, or 5,800 tons per day. In round figures, we may safely call it 6,000 tons per day or 2,000,000 tons per annum. Our stock of coal and coke on Feb. 28 last amounted to 108,663 tons, as compared with 98,697 tons at the same date in the preceding year. At the present time the stock has risen to 200,000 tons, as compared with about 150,000 tons at this period last year. Although this is a higher stock than usual, it is not really excessive, being distributed over places as far distant as Tongshan, Ching Wang Tao, Tongku, Tientsin, Shanghai and Hongkong, not to mention others. At the last meeting we gave you some figures as to the estimated reserves of coal within certain limits at our three mines, which amounted to no less than 39,000,000 tons. As regards the coal exposed or actually in sight in the mines at Feb. 28 last, according to the engineer's report it was, in round figures, as follows:—Tongshan, 5,346,000 tons; north-west shaft, 272,000 tons; and Linsi, 3,429,000 tons, making a grand total of 9,047,000 tons, which is equal to about eight years' supply on the basis of the sales of the past year. During the year a scheme of afforestation of a portion of the company's lands at Tongshan and Linsi has been initiated, with a view to providing the company with its own supply of pit-wood. As regards the immediate future, we are not in a position to speak definitely. We are advised that some revival of business was expected during the present autumn, but that

there was nothing to warrant optimistic views as to the return of general prosperity in North China. Want of money is said to be the one main feature of the situation, and while this continues the local trades and industries, on which our sales in North China largely depend, are stagnant. It is to be borne in mind also that coal is still very little used in China for domestic purposes, and that any development in this direction is naturally checked by adverse conditions in trade. Persistent efforts are being made by the management to encourage and increase the use of coal for domestic purposes by the introduction of suitable stoves, and considerable progress has been made in this direction. The sales from March 1 last to October 9 amounted to 783,000 tons, being an increase of almost exactly 100,000 tons over the sales for the corresponding period of the previous year, whilst the proceeds showed an increase of over $290,000. But against this we have to set the fact that, owing to good crops, there will be an unusually large supply of native fuel this season, which may seriously affect our sales for the remainder of the year. We have just entered on the three months which should be the best in the year. We shall see to what extent they are affected by the competition of native fuel. I now beg to move: "That the directors' report and accounts be and they are hereby received and adopted and that a further dividend be declared of 1s. 6d. per share, making 15 per cent. for the year, free of income tax, payable on Nov. 2 next," and I will ask Sir Hubert Jerningham to second that.

Sir Hubert E. H. Jerningham, K.C.M.G., seconded the motion which was carried unanimously. The appointment of Sir Hubert Jerningham as a director was confirmed. The retiring directors Messrs. G. de Laveleye, G. T. Symons. W. F. Turner, and G. P. Walford, were re-elected.

Mr. J. R. Michael, in proposing the reappointment of Messrs. Annan, Dexter and Co. as auditors of the company, said the report and accounts submitted had no doubt been received by the shareholders with very much satisfaction, the more so because of the very serious depression which had prevailed in the general trade and in shipping in the Far East, and which had been very persistent. They could only hope that in that respect they were now turning the corner. Great credit was undoubtedly due to the board of directors and to the staff of the company for having presented such a satisfactory report in respect of the past year's operations.

The motion was unanimously agreed to, and the proceedings terminated.

THE KUALA LUMPUR RUBBER, CO., LTD.—This company pays 20% dividend, places £5,000 in the reserve and carries forward £3,853.

THE CANTON INSURANCE OFFICE, LTD.—The profits for the year amounted to $294,300.59, of which the sum of $194,300.59 was carried to underwriting suspense account and $100,000 to pay a dividend of $10 a share.

THE HONGKONG AND CHINA GAS COMPANY LTD.—This company has declared a dividend of 10 shillings a share.

THE STEAM LAUNDRY CO., LTD.—This company paid a dividend of 8% and carried forward $62.94 after writing off for depreciation in plant, $1,910.

THE CHINA LIGHT AND POWER COMPANY, LTD.—The credit to profit and loss amounted to $446,483 of which $400,000 was placed in the reserve and the balance carried forward. The chairman announced cash in hand of $687,407, including the balance left from the sale of the Canton franchise and plant.

CONTRACTING NEWS

Messrs. Riley Hargreaves & Co., Ltd., of Singapore, have secured the contract for making alterations to the Cape Ricardo lighthouse and to instal a new second order triple flashing apparatus and lantern.

ELECTRIC LAMPS.—Municipal Electricity Works, Shanghai, 32,950 lamps—Contract awarded as follows:

(a) 9,700 *Carbon Filament Lamps:*—

Messrs. Brighten, Malcolm & Co. 'Cryselco' 4,850 lamps £132.0.0.

The Shanghai Elect. & Asbestos Co., Ltd., 'Robertson' 4,850 lamps £131.10s.

(b) 23,250 *Metallic Filament Lamps:*—

Messrs. Brighten, Malcolm & Co. 'Cryselco' 11,625 lamps £1,336.14.3.

The Shanghai Elect. & Asbestos Co., Ltd., 'Osram' 11,625 lamps £1,472.10s.

The remaining tenders are as follows:

(a) 9,700 CARBON FILAMENT LAMPS.

Name	*Make*	*Delivery Weeks*	*Price.*
L. Murat	Paris	10	£161
Andersen, Meyer & Co.	B. T. H.	12	197
Scott, Harding & Co.	Austrian.	14	215
Alois Schweiger & Co., Ltd.	Kremenzky	18	222
Melchers & Co.	Korlher Speller & Co.	16	223
Siemssen & Co.	Siemens & Halske	12	225
Arnhold, Karberg & Co.	A.E.G.	10	240
Innis & Riddle	Laidler Ritchie	16	241
Dodwell & Co., Ltd	Ediswan.	10	242
W. Klose & Co.	Phoebus	15	246
Andersen, Meyer & Co.	G.E.C. (Tokio)	—	247
Reiss & Co.	Ediswan	14	254
Andersen, Meyer & Co.	G.E.C.	15	259
Von During, Wibel & Co.	Vickers Sons & Maxim	14	270
Shewan, Tomes & Co.	Brit. Westinghouse Co.	—	271
Jardine, Matheson & Co., Ltd.	Sunbeam	12-14	275
do	Robertson	11-12	276
Westphal, King & Ramsay, Ltd.	Robertson	13	283
Shanghai Dock & Eng. Co., Ltd.	Ediswan	10	284
Sheldon, Bakels & Co.	Robertson	10-12	285
Takata & Co.	Robertson	14	287
Samuel, MacGregor & Co., Ltd.	Sunbeam	4 f.o.b.	286
Scott, Harding & Co.	Cryselco	4 f.o.b.	303
Dickeson, Jones & Co.	Austrian	26	306
Siemens Schuckertwerke	Cryselco	18	326
Shanghai Machine Co.	Cryselco	15	328
Mitsui Bussan Kaisha	Japanese	10	348

(b) 23,250 METALLIC FILAMENT LAMPS

Name	*Make*	*Delivery Weeks*	*Price.*
Andersen, Meyer & Co.	G.E.C.	15	£2,061
Siemens Schuckertwerke	Tantalum	18	2,081
L. Murat	Paris	10	2,402
Westphal, King & Ramsay	Phillips	17	2,490
Dodwell & Co., Ltd.	Tantalum	16	2,541
Alois Schweiger & Co., Ltd.	Kremenzky	22	2,541
Siemssen & Co.	Felten & Guilleaume	10-26	2,571
Melchers & Co.	J. Pintszch	17	2,593
Arnhold, Karberg & Co.	A.E.G.	12	2,643
Scott, Harding & Co.	Tantalum	6 f.o.b.	2,682
do.	Wolfram	14	2,808
Shewan, Tomes & Co.	Brit. Westinghouse Co.	—	2,883
Innis & Riddle	"Z" & Co.	26	2,937
Andersen, Meyer & Co.	Deutsche Gasgluhlicht Actiengesellschaft	—	3,018
Jardine, Matheson & Co., Ltd.	German Gas Light Co.	11-12	3,044
Shanghai Dock & Eng. Co., Ltd.	Tantalum	14	3,050
Sheldon, Bakels & Co.	Osram	14	3,084
Jardine, Matheson & Co., Ltd.	Osram	15-16	3,139
Takata & Co.	Osram	14	3,167
W. Klose & Co.	Osram	12	3,183
Westphal, King & Ramsay, Ltd.	Osram	17	3,193
Pinfold & Co.	Monowatt	25	3,205
Evans & Co.	Osram	17	3,214
Takata & Co.	Osram	16	3,219
Von During, Wibel & Co.	Vickers Sons & Maxim	14	3,299
Samuel, MacGregor & Co., Ltd.	Sunbeam	12 f.o.b.	3,507
Dickeson, Jones & Co.	Austrian	26	3,564
Shanghai Machine Co.	Cryselco	15-21	3,678
Reiss & Co.	Ediswan	25	3,883

COAL—F. M. S. RAILWAYS—MINIMUM 1700 TONS MONTHLY.—Contract secured by Messrs. F. W. Heilger & Co. of Calcutta for 1910.

STEEL BARS FOR REINFORCED CONSTRUCTION.—Shanghai Municipality.—16,000 pounds. Awarded Yao Sing-Kee, Tls. 5 per 100 pounds. The other tenderer was Mr. A. T. J. Pike, Tls. 6 per 100 pounds.

RAILWAY SUPPLIES.—Minister Public Works, Siam.—Tenders invited for supply of two tank locomotives, five rail wagons, 12 ballast wagons, all of meter gauge.

ELECTRIC TRAMWAY SUPPLIES—OSAKA MUNICIPALITY.—Tenders invited for supply of material and rolling stock.

RAILWAY CONSTRUCTION TIMBER.—Imperial Chinese Tientsin-Pukow Railway (Southern Section) Indent 72. Tenders invited not later than December 21st, 1909, delivery, of

150,000 Wooden sleepers, each 8 feet by 9 inches by 5 inches.
200 Crossing timbers, each 9 feet by 9 inches by 5 inches.
200 Crossing timbers, each 10 feet by 9 inches by 5 inches.
200 Crossing timbers, each 11 feet by 9 inches by 5 inches.
200 Crossing timbers, each 12 feet by 9 inches by 5 inches.
200 Crossing timbers, each 13 feet by 9 inches by 5 inches.
400 Crossing timbers, each 14 feet by 9 inches by 5 inches.
200 Crossing timbers, each 17 feet by 9 inches by 5 inches.
5,000 Bridge ties, each 10 feet by 9 inches by 6 inches.

Delivery April 31st, 1910.—Indent 76:—

188,000 Wooden sleepers, each 8 feet by 9 inches by 5 inches.
3,400 Bridge ties, each 10 feet by 9 inches by 6 inches..

Opened December 21st, 1909.—To be delivered June 30th, 1910. Bids to be addressed The Managing Director.

GALVANIZED AND CORRUGATED IRON ROOFING—Municipality of Shanghai.—270 sheets. Messrs. A. R. Burkhill & Sons were awarded the Contract, Price Tls. 7.50 a picul. The other bidders were Messrs. Jardine, Matheson & Co., Ltd., Tls. 7.50 per picul and Messrs. Andersen, Meyer & Co., Tls. 7.80 a picul.

HOSPITAL KITCHEN EQUIPMENT.—Philippine Bureau of Supply—For new General Hospital, Manila. Bids opened December 29th, 1909.

CAST IRON PIPES FOR WATER SUPPLY.—Bangkok Sanitary Department. No date given.

PROPOSALS ROOFING TILES.—Constructing Q. M. Fort Mills, Corregidor, 200,000. Bids to be opened January 14th, 1910.

PROPOSALS FOR COAL:—Headquarters Philippines Division, Office of Chief Quartermaster, Manila, December 13th, 1909. Sealed proposals, in triplicate, subject to usual conditions, for furnishing approximately 65,000 tons of coal to the Quartermaster Department U. S. Army, during the Fiscal Year 1911, will be received here until 10:00 a. m. May 16th, 1910, and then opened. Information and blank forms furnished on application. F. G. Hodgson, Deputy Quartermaster General, U. S. A., Chief Quartermaster.

FAR EASTERN RAILWAY NEWS

SUMATRA RAILWAYS.—A report on the development of Sumatra contains recommendations for the construction of an extensive system of railways designed to tap the rich agricultural and mineral lands. It is proposed to expend the sum of 62,000,000 guilders covering a period of ten years active construction. It appears that the country is sparsely settled and that it will be necessary to import labor in order to make the railway building campaign a success.

JAPAN'S RAILWAY REVENUE.—The total mileage under the control of the Railway Board according to the official report covering the month of September was 4,569 miles and the total receipts from all sources for the month were yen 6,703,500 or yen 48 per mile per day. This is a falling off compared with the corresponding month of last year of 83,396 and indeed during the six months, including September, the falling off in receipts amounted to yen 726,660 and the Board anticipates a falling off of at least a million during the present year. The passenger receipts for the month amounted to yen 3,716,410, an increase of yen 98,850, while the freight receipts amounted to yen 2,987,090, a decrease of yen 182,746 as compared with September last year. The traffic mileage of Japan's Railways has increased from 2,768 in 1897 to 4,569 at the date of the September report.

TONKIN-YUNNANFU RAILWAY EXTENSION.—The completion of the French Railway to Yunnanfu has stimulated interest in the extension from Yunnanfu to Luchow, Szechuan. This proposed line has been surveyed by way of Milong, Khuchingfu, Chanyichow and on via Hsuanweichow Yuning-hsien to Luchow. Should this road be extended it would give an outlet to the products of Szechuan by way of Haiphing and would no doubt affect the Shanghai trade via the Yangtsze. However, the construction of this extension presents one of the most difficult problems, without reference to the expense which would be enormous. It would pass through a mountainous country and at some points with altitudes over 8,000 feet. It would require much tunneling and cuttings. It is conceded, however, that the construction of the railway would bring large returns on investment. The outlay and the success of the work of construction of such a line would depend in a large measure on the co-operation given by the natives along the line of survey.

JAPANESE GOVERNMENT RAILWAY WORKS.—It has been announced officially that the Railway Board has in view the establishment of extensive locomotive and car building and repair shops to cost in the vicinity of yen 2,000,000 after the year 1913 in order to cope with the demand for railway supplies to cover the extensive operations in railway building contemplated in the new program to commence that year.

MANCHURIAN RAILWAY CONSTRUCTION.—The latest report from the progress made on the Antung Mukden reconstruction is to the effect that a section of about 25 miles connecting Antung and Shihchaotic was to have been opened for traffic by November 20th. Offices for the purchase of land and crops from the natives along the right of way have been established and the work of securing the lands has met with a minimum of opposition. It is not believed that much will be accomplished until the spring excepting pressing the work of tunneling and cuttings.

The construction of the Kirin-Changchun line is expected to begin in the spring. All the necessary arrangements are now being perfected so that unless some unforeseen difficulties present themselves there will be no further postponement. The doubling of the entire line of the South Manchuria Railway will soon be completed. Much of this work where it is most needed to carry the heavy traffic is now finished.

PEKING-KALGAN EXTENSION.—With the completion of the Peking-Kalgan line the prospects for great activity in invading Mongolia with a view to opening up the country to settlement grows brighter. Last year the route covering a distance of over 260 miles connecting Kalgan with Ho-k'ou on the Yellow River was surveyed, and now that the line to Kalgan makes the construction more feasible work will commence at once. It is the purpose of the government to finance it with the surplus earnings of the Imperial Railways of North China and to make it a purely Chinese road as is the Peking-Kalgan. It will take probably six or seven years to complete.

KUALA LUMPUR RAILWAY STATION.—The *Malay Mail* describes the new station being built by the F. M. S. Railways at this point.

The new station buildings, with platforms, will cover about 140,000 square feet or 3¼ acres when complete, the approximate cost being nearly $250,000. They will consist of the following:—A large station building facing on Damansara Road occupying the site of the present station and a good deal of additional space. Inside the station will be three platforms, one each side and an island platform, the whole covered by a roof. On the further side will be no buildings but only the outer wall of the station supporting one side of the roof. This is the wall which has recently arisen bleak and menacing from a welter of bricks and mortar on the side of the station furthest from Damansara Road. Two subways, one for passengers and one for luggage, will connect the different platforms.

CHANGSHA-CHU-CHEO RAILWAY.—This section is now being constructed from Changsha and a distance of two miles is reported completed. The station and yard grounds are near the New River at Changsha. On the Chu-cheo end operations have likewise begun and there is prospect for the early completion on this section which will ultimately become a part of the Canton-Hankow.

TIENTSIN-PUKOW (NORTHERN SECTION).—The Hon. Chu Cheng-chi has been appointed Acting Managing Director of this section until the vacancy following the scandal is filled permanently.

SZECHUEN-HANKOW RAILWAY.—The work of construction on the Ichang-Wanhsien section of this line was commenced on November 8th. A number of students from the Railway College at Chengtu have been engaged to superintend the work.

THE TIENTSIN TERMINUS OF THE TIENTSIN-PUKOW.—It has been decided, according to the latest advices, to locate the station near Hsiku at the extreme northern end of the city. This gives a station at the South Gate as well as the terminal and a bridge across the river will give easy connection with the Peking Railway from the site selected.

SOUTH MANCHURIA RAILWAY'S HALF YEAR.—The passenger and freight receipts of the S. M. railway for the past six months ending September last, amounted to Yen 5,850,177, showing an increase of Yen 1,477.42 over the figures for the corresponding period of last year. The six months' receipts per mile per day for the main line are returned as Yen 61.73 and that for the Antung-Mukden line Yen 5.54; increases of Yen 17.61 and seven sen respectively on the last figures.

MIRUNO-NOJIRI RAILWAY.—This section, five miles in length, and part of the Central Western Railway of Japan, was opened to traffic in September.

CANTON-HANKOW CONSTRUCTION.—The Liangtan-Pikiangkou section of this line was opened for traffic in October. This section adds six miles to the 45 miles operating between the Canton terminus and Liangtan. Two trains daily each way are scheduled.

KOREAN RAILWAYS.—The transfer of the Korean lines to the control of the Japanese Railway Board has been the subject of much discussion, but there can be no doubt of the purpose of the Japanese authorities to press the campaign of railway construction proposed for the next few years. The estimate for the survey and preliminary expenses entailed on the proposed Seoul Wonson and Ho-Nam lines which will cover the fiscal year of 1910, amounts to yen 1,000,000 each. It is understood that some old surveys prepared by earlier promoters will be followed in a large measure in regard to the Ho-Nam line.

INDIAN RAILWAYS.—The report for the year ended June 30th gives a total mileage of railways in India of 30,500 miles and about 3,000 additional miles under construction.

NEW HUPEH RAILWAY PROPOSED.—The construction of a line 250 kilometers in length connecting Siang yang fu on the Han River with Kuang-shui on the Peking-Hankow Railway has been proposed by the Viceroy of the Hukuang Provinces. The province of Hupeh pledges half the amount of the capital and the Peking-Hankow the balance.

THE CHIN-HSU RAILWAY.—The construction has commenced on this line which, when complete, will connect Hsuchowfu on the Tientsin-Pukow with Kwachow, a point opposite Chekiang on the Shanghai-Nanking line. This line is being built by Chinese capital. The line will follow the Grand Canal from Kwachow to Tsingkiangpu.

SOUTH MANCHURIA SLEEPING CARS.—Two sleeping cars built after the Pullman pattern but with Wagon-Lits appointments and sleeping arrangements will soon be turned out at the South Manchuria Railway Shops at Dairen. Each car will accommodate 30 passengers.

JAPAN'S TRANS-EMPIRE LINE COMPLETED.—On November 21st the formal opening of the Kagoshima line was celebrated and thus was formally opened to traffic a trunk line crossing the Empire a distance of 1,750 miles, the construction of which was begun in 1899. This trunk connects Kushiro in Hokkaido and Kogoshima in Kyushu. The Kagoshima line, the completion of which concluded this important trunk, connected that city with Yashima. The time between the termini is placed at about five days and from Tokyo to the Southern terminus, 48 hours. A correspondent of the *Japan Times* says:

"Japan can now, if need be, assemble three divisions of her armed forces at her southernmost point within 12 hours, and treble that number with additions from Tokyo with 48 hours. To say nothing of the strengthening of the national defence of Japan, therefore, we may view this as a great progress made in Japan's railway enterprise not necessarily for military purposes, but more so by enhanced facilities for trade and transportation."

SIBERIA'S NEW TRUNK RAILWAY.—The survey of the new line connecting Chita with Khabarovsk is being pushed rapidly. When completed and connected up with other central and western lines projected will give Siberia a valuable network of railways and double connection with Vladivostok.

NANKING-WUHU RAILWAY.—The Kiangsu council has decided to raise the funds for the construction of this line from among the merchants and gentry of the different towns affected in Kiangsu and Anhui.

JUNCTION OF THE SHANGHAI-NANKING AND KASHING RAILWAYS APPROVED. The Ministry of Posts and Communications has approved the junction of the Shanghai-Nanking and the Shanghai-Kashing railways. It has been decided that the junction should begin at Chenju and pass Chiangch'iao, Peihsingching and Tsaohoching to Meichialung.

FAR EASTERN ENGINEERING, CONSTRUCTION, COMMERCIAL AND FINANCIAL NEWS

TOKYO ELECTRIC LIGHTING.—The city of Tokyo has two competing companies engaged in supplying electric lighting to the capital. The Tokyo Electric Railway Company recently applied for permission to supply light in the Fukugawa district and the result has been a great reduction in the rates as against those of the Tokyo Electric Light Company's. It is believed, however, that when the lines in the suburbs are completed, the railway company will need all its surplus power for traction.

BOMBAY WIRELESS.—A station was opened in October at this point for communicating with the P. & O. steamers with a radius of 300 miles.

KINUGAWA HYDRO-ELECTRIC PROJECT.—The failure of this company to secure a contract from the Tokyo Railway Company for the supply of power has had the effect of discouraging the promoters of the much talked of enterprise. Those connected with the project hoped to secure a tentative contract in order to brighten up the prospectus and induce the investment of foreign capital which has been rather timid.

It is now believed that every effort will be made to induce local Japanese capital to take up the stock of the company and otherwise finance it.

RANGOON MOTOR FIRE ENGINE.—This modern fire fighter was purchased from Messrs. Merryweather & Sons of London. It has a speed of 30 miles an hour and a pumping capacity of 400 gallons per minute. It is especially adapted for climbing heavy gradients.

MUKDEN ELECTRIC WORKS.—Arrangements have been made with the Chinese Electric Light Company to supply light for the streets connecting the walled city with the park.

JAPANESE ELECTRICAL ENTERPRISES.—The Belgian Consular reports give the information that there are 177 firms and companies engaged in electrical enterprises in Japan representing a force of 300,000 kilowats.

Some 210,000 houses are lighted by electricity, being provided with 800,000 incandescent lamps and 910 arc lamps.

The most important company is the Tokyo Electric Light Company, which at present has three power stations and nine sub-stations for transformation; this company is about to enlarge its works to the extent of four generating machines and 47 transformers, and has under consideration the erection of new power stations and sub-stations for transformation, etc. Several other companies are also about to undertake improvements and extensions of a similar nature, whilst others newly constituted have not yet completed their installations.

The number of officially recognized electric tramway companies is 60; of these, however, only some 20 are as yet working, the installation being generally slow for lack of capital.

JAPANESE RAILWAY BOARD'S ACTIVITY.—The electricity needed on the Yamanote line amounts to 2,000 H. P., the half of which will be supplied by the Okubo Power Station while the other half will be supplied by the Tokyo Electric Railway Co. However, in view of the necessity of supplying power by its own power station it is said to have decided to establish an electric power station on a big scale capable of generating 6,000 or 8,000 H. P. in the vicinity of the River Kokugo. For this purpose, the Board has put 2,700,000 *yen* on the list of the next year's budget.

FORMOSAN ELECTRIC INSTALLATIONS.—The cities of Tainan and Taikow are to be supplied with light and power from an electric generating plant being installed at Takow.

LINKING THE BRITISH EMPIRE BY WIRELESS.—In his scheme to establish a line of stations linking up the British Empire, Mr. Marconi proposes the central station in South Africa and by way of Bombay, Cairo and Malta connect up the Far Eastern Station with London. A service between Singapore and China would include a link 1,200 miles in length to Hongkong.

JAPANESE-HAWAIIAN WIRELESS.—Experiments are being made for the purpose of extending connections between the islands but up to a recent date little success has been reported. The Japanese are, however, sanguine of success. Unintelligible sounds have been transmitted for over 3,000 miles, but that is the limit of accomplishment.

YAMATE ELECTRIC RAILWAY.—This railway was opened to the public this month. The line connects Shinagawa and Akabane and power is secured from the Tokyo Railway Company. The distance is 20 miles and is divided into about 10 sections. The fare will be about 3 sen a section or 20 sen for the entire distance.

THE SHENANOGAWA HYDRO-ELECTRIC PROJECT.—The prospectus of this company proposes to develop 200,000 h. p. at the rapids of Otaki on the Shinano River; 130,000 h. p. at Tsukioka and 4,000 h. p. at Shikuma Pass on the same river. It is also proposed to convey the power to Tokyo by one of three routes involving 130, 102 and 122 miles respectively. The project is reported to be financed by New York capital. One economic feature of the construction is the transportation of supplies to a point near the central station via the Chikumagawa River.

JAPANESE-AMERICAN ELECTRIC AMALGAMATION.—The negotiations between the General Electric Company and the Shibaura Engineering Works with a view to amalgamation of interests in Japan is reported to have taken a favorable turn according to a cable received by the Mitsui Company, and the Japan Financial and Economic Monthly announces an amicable settlement of all disputes.

THE OJI ELECTRIC RAILWAY CO.—A project for the purpose of establishing lines to the North of Tokyo is being promoted by Tokyo capitalists. The capital necessary for the purpose will exceed yen 2,000,000. Permission has been granted for survey and construction by the central government.

DAIREN ELECTRIC RAILWAY.—This system under the control of the South Manchurian Railway opened September 25th, and from official reports it is learned that during the first four days 21,929 passengers were carried and yen 2,878 represented the revenue for that period. The conductors and motormen are Chinese.

SAIGON AIRSHIP SOCIETY.—This association expects to receive its first Blériot airship by the middle of January. The society is considering a voyage from Saigon and Paris in one of these monoplanes.

KOREAN TELEGRAPHS AND TELEPHONES.—The entire length of telegraph lines now in operation in Korea measure approximately 7,000 miles while the telephone wiring exceeds 4,500 miles. Most of these lines have been built and put in operation since Japanese occupation.

PACIFIC MAIL WIRELESS.—The S. S. Korea equipped with a two kilowatt and a five kilowatt wireless apparatus on a test trip made a record of 2,725 miles at night and 625 in the daytime during her last trip outward from San Francisco.

PORTABLE TELEPHONE SERVICE.—The South Manchuria Railway has installed this apparatus on several emergency trains.

RUSSIAN WIRELESS INVENTION.—A Russian student has invented a wireless apparatus that is reported to be non-tappable and it is understood that the War Department has recommended the installation of a system connecting Vladivostok and the Russian capital by a line of stations.

PAKHOI ELECTRIC LIGHT INSTALLATION.—The municipality has advertised for tenders for the supply and installation of a system of from 500 to 1000 electric lamps.

DALNY-CHEFOO CABLE.—The following information in regard to this cable which was opened for service July 20th, 1909, is given by Consul Williamson of Dalny:

This cable is about 88½ nautical miles long, of which Japan owns approximately 81 and China 7½ nautical miles. The rate for messages to Chefoo has been reduced from 48 cents per European word, via Sasebo, Nagasaki, and Shanghai, or 13½ cents per word under last year's agreement with China by which messages can be sent overland via Newchwang to Chefoo, to 8 cents per European word over the new cable. A corresponding reduction is made for messages in Japanese "kana" with seven kana characters equaling one European word. This rate is for messages from any station in South Manchuria to the Japanese post-office in Chefoo. Although these messages must pass over some 7 miles of Chinese lines, I understand they are switched to the Japanese post-office direct without passing through Chinese hands. The Chefoo Japanese post-office divides its receipts from this source with the Chinese office. It is said that this new cable cost Japan ¥100,000 gold for her portion.

WIRELESS FOR HONGKONG.—Messrs. Rosencrantz & Keegan representing the United Wireless Telegraph Company have made application for permission to install a wireless station at Hongkong under an exclusive franchise extending over a period of 25 years. They announce as their purpose the installation of stations in Manila, Singapore and Bangkok. They also agree to make the installation at Hongkong equal to the New York City wireless station.

MUNICIPALIZATION OF TOKYO ELECTRIC RAILWAY SYSTEM.—The municipality of Tokyo and the company have been carrying on negotiations for the purchase of the franchise and plant by the city but apparently without success. The municipality offered yen 58,000,000 while the company would not consider an amount less than 65,000,000 yen.

PHILIPPINE WIRELESS.—The stations at Jolo, Zamboanga and Malabang are operating satisfactorily and two additional stations are to be installed in the vicinity of Manila which will give communication with vessels many miles out from the San Bernardino Straits.

TAXING TOKYO ELECTRIC LIGHT COMPANY.—The municipality has concluded an agreement with the company whereby the latter reduces its charges 30% and pays 3% on the net revenues of the company, after all legal reserves are taken care of up to the sum of 2,000,000 yen in profits.

In excess of that amount up to three millions the tax will be 2.5% and above that amount 2%. These taxes will go into effect in three years and the Tokyo company will pay in lieu of taxes the sum of yen 60,000 for the first, yen 65,000 for the second and yen 70,000 for the third year intervening.

ODAWARA ELECTRIC RAILWAY EXTENSION.—It is proposed to extend the Odawara line

through Hakone to connect with the Government railway at Mishima for the purpose of attracting the tourist traffic to Hokone.

BUREAU OF HYDRO-ELECTRIC POWER.—Baron Goto has recommended the appropriation of yen 1,500,000 for the purpose of making investigations of hydro-electric projects throughout the empire under the direction of a new bureau in connection with the Electricity Department under the Railway Board.

THE ANGLO-JAPANESE HYDRO-ELECTRIC POWER COMPANY.—Of all the projects considered to provide power and light to Tokyo, this enterprise seems to have received the greatest encouragement from foreign investors. The British experts report most favorably on the enterprise and claim that the project is the best yet suggested. The original plans have been changed reducing the height of the retaining walls from 300 to 200 feet and locating the reservoir an additional distance of six miles from the capital.

PENANG TRAMWAYS.—This system carried 2,230,000 passengers during the last fiscal year.

PUBLIC WORKS, DOCKS, WHARVES, ETC.

SINGAPORE SEWAGE DISPOSAL.—The Committee appointed to inquire into the most desirable methods of disposal of sewage recommends the treatment of sewage by means of bacteria beds in preference to disposing of it in the sea in view of the excessive cost of latter. The committee also recommends negotiations with London experts with a view to securing their advice on a suitable scheme to meet local conditions.

KUALA LUMPUR WATERWORKS.—The dam at the new waterworks near Ampin is completed, says the *Malay Mail*, and in a few weeks' time the supply should be reaching Kuala Lumpur through the supplementary pipe line. This latter line will be retained after the distributing reservoir is completed for emergency in case the regular supply should be cut off in case of fire.

IPOH'S NEEDS.—A number of residents of Kinta have presented a petition to the High Commissioner, His Excellency Sir John Anderson, asking among many requirements for Ipoh that a harbor be provided at Lumut to accommodate large sea-going vessels and thus assist in the development of Perak generally. The petitioners directed attention to the fact that while Perak subscribed revenue to the amount of four millions, the expenditure did not exceed one and one-half millions. In addition to improving the harbor a request was made to build a railway connecting it with Ipoh.

KOREAN PUBLIC WORKS.—The following is a list of estimates for the next fiscal year submitted by the Civil Engineering Department of the Korean Home Office:

	Yen.
Highways	545,396
Highways	832,960
Repairs of roads and bridges	37,128
Dredging river at Seoul	36,420
Improvement of streets in Seoul	250,000
Public works in Seoul	30,600
Investigation of five great rivers	253,990
Investigation of public works	32,185
Investigation for construction of waterworks	5,790
Construction of waterworks at Chemulpo	326,815

All the above, with the exception of Highways yen 545,396; Public Works in Seoul, yen 30,600; investigation of Public Works 32,185; Investigation of Waterworks construction 5,790, and Construction of Chemulpo Waterworks, are new projects. The investigation of the five great rivers which will cost about yen 1,358,530 and cover a period of seven years refers to the Naktong, Yunsan, Keum, Han and Taitong. The investigation with reference to waterworks refers to projects at Taiku, Kunsan and Wonsan.

YOKOHAMA WATERWORKS.—The council of Yokohama recently made an allotment of yen 7,000,000 the greater portion of which will be expended in the enlargement of the city waterworks and a part will go to the Kanagawa Prefectural Exhibits Society in connection with the Anglo-Japanese Exhibition.

FILTER BEDS AT IPOH.—Messrs. Howarth, Erskine, Ltd., have secured the contract for the installation of a septic tank and filter bed at Ipoh according to the *Perak Pioneer*.

IMPROVEMENT OF THE PORT OF CALCUTTA.—Two schemes have been suggested for the betterment of this port by the Chief Engineer of the Public Works Department as follows:

(i) A scheme for the construction of two separate works, namely:—

	Rs.
(a) A 600 feet break water opposite to the old Custom-house estimated to cost	2,72,345
(b) A reinforced concrete jetty on the site of the present pier estimated to cost (without cranes)	1,54,000
Total	4,26,345

or (ii) A scheme for the construction of these two works (break water and jetty) in combination, both being constructed at a suitable site to be selected. This scheme is estimated to cost Rs. 3,92,196 and is preferred by the Chief Engineer.

THE WHANGPOO CONSERVANCY.—After an interruption of over two months, work on the dredging was resumed the last of November. The contract was given the Chinese Company and the price is Tls. 0.225 per cubic yard.

PHILIPPINE GENERAL HOSPITAL AND MEDICAL SCHOOL.—The General Hospital which represents an investment of ₱750,000 is nearing completion and will be occupied as soon as the supplies and equipment are available. The medical school construction is progressing rapidly.

MANILA HARBOR AND PASIG RIVER IMPROVEMENTS.—In his report for the fiscal year ended June 30th, 1909, the Collector of Customs recommends the reduction of the size of the gap in the breakwater and the dredging of the harbor to a greater depth directly inside the breakwater; the completion of the river wall on the Pasig; a bridge over the river connecting the south side with Calle Rosario on the north and other improvements to facilitate river traffic and coastwise trade by better handling of cargo.

HOKKAIDO PUBLIC IMPROVEMENTS.—It is the purpose of the Japanese Government to expend during the next 20 years the sum of yen 50,000,000 in the improvement of rivers and harbors, bridges, roads, etc., in Hokkaido.

WHARVES FOR BANGKOK.—The Standard Oil Company is building a 45-foot wharf at Upper Paklat and the China Steam Navigation Company has placed orders for the construction of two additional wharves at Bangkok.

DAIREN HARBOR IMPROVEMENTS.—The 500 feet of the new East Breakwater provided for this year is now complete. When the breakwater is finished it will be 1200 feet long, and when the harbor is in shape there will be sufficient additional berthing space along this quay to accommodate at least 13 vessels of 5,000 tons each.

DREDGERS FOR THE JAPANESE GOVERNMENT.—The Uraga Dockyard has secured an order for the construction of two dredgers for the Departments of Home Affairs and Finance.

JAPANESE CONSULATE AT SHANGHAI.—The corner stone of the new consulate was laid last month at the site of the old consulate on the Whangpoo Road. This building will cost about yen 200,000. The main building will be three stories and constructed of brick and stone.

DRYDOCK FOR SHANGTUNG BAY.—The German Minister has asked permission to construct a large drydock in Shangtung Bay. So far as can be learned no action has been taken at Peking.

PORT SWETTENHAM IMPROVEMENTS.—Besides an allotment of $100,000 for the new wharf an additional $138,600 is proposed to be utilized in improving the facilities for loading and unloading cargo.

THE KLANG RIVER BRIDGE.—This bridge which spans the Klang River at Klang is the largest bridge in the F. M. S., says the *Perak Pioneer*.

It is of the Linville girder type and has four spans of 140 feet each and is 20 feet wide and cost two hundred and sixty thousand dollars. How well it has justified its construction is evident from the following remarks which occur in Mr. Scott Mason's report on that district for the year 1908.

"The erection of this bridge means an annual savings of hundreds of dollars to every estate on the north side of the river; there is a saving of about five cents on every bag of rice imported, and on every chest of rubber and a bag of copra or coffee exported."

MINDANAO PUBLIC WORKS.—The appropriations for the year 1910 include the expenditure of ₱54,000 for roads and bridges and ₱64,000 for wharves at Iligan and Zamboanga.

PORT OF CHINWANGTAO.—Mr. Hillier, Commissioner of Customs, says that the port of Chinwangtao has not developed as was predicted when it was opened, in spite of the fact that excellent advantages are afforded by the Chinwangtao Harbor Works, which were built at great expense by the Chinese Engineering and Mining Company. Since Chinwangtao was opened its status has not materially changed from that of a coal outlet and a winter jetty for the north of China.

ZAMBOANGA WATERWORKS.—The Board of Directors of the Zamboanga Water, Electric & Power Company reports the completion of the waterworks survey and has made a proposal to the legislative council to provide the city with pure water from a plant having a capacity of supplying 750,000 gallons daily and to maintain a reserve of 4,000,000 gallons. The company will secure its supply above any habitation passing it through filter beds with settling basin and reservoir at such an elevation as will give a static pressure of 100 pounds to the square inch.

PENANG WATER SUPPLY.—The plans recommended will cost about $2,500,000 to include a reservoir at the Waterfall Garden, a service reservoir at Ayer Etam and a main from the Waterfall Garden.

BOMBAY HARBORWORKS.—The policy of the Port Trust has resulted in making Bombay one of the cheapest ports in the world. The Prince's and Victoria wet docks and the Meriwether dry dock have been constructed, some miles of wharves have been built, many acres of swampy foreshore have been reclaimed, acres of warehouse accommodations for the storage of goods have been erected, and a considerable mileage of roadway has been laid, and, in addition, a vast number of improvements have been made in the lighting and general equipment of the port. All this has involved an expenditure of $8,000,000 says Consul Dennison.

The extensive works completed are being supplemented by others of even larger magnitude, which may be summarized as follows:

A wet dock with an area of 49.52 acres, a 3-mile length of quay, including the harbor wall, an entrance 100 feet wide, with sill at 35½ feet below mean high-water level. A new dry dock, opening off the wet dock, will be 1,000 feet in length, with an entrance 100 feet wide and with sill 33½ feet below high-water ordinary neap tides. The cost of these docks will be about $12,000,000.

The Port Trust Railway is a project of great importance, and will very much facilitate the handling of freight by providing direct connections between steamers' berths in the docks and the two trunk lines of railway running into Bombay, and should have the ultimate effect of cheapening the methods of handling exports.

The Mazagon-Sewri Reclamation will provide space for the grain, seeds, and cotton trades, and for a new store yard for the Great Indian Peninsular Railway. The total area which is being recovered is 622 acres, of which 554 acres are to be actually reclaimed from the sea, the balance being low-lying land which is to be raised for effective use. The whole area of the island of Bombay is only 14,342 acres, so that this reclamation will add very nearly 4½ per cent to the area of the city.

The remaining improvement is the moving of the bulk oil depot and the timber ponds to Sewri. This work is progressing rapidly and will include a site of 61 acres, a deep-water berth for the tank steamers, and a length of 11,000 feet of low pier for the pipe line from steamers to tanks.

These works, which are all in progress, and which are to be completed in two years, will double the dock accommodation of the port, provide a splendid graving dock, and shift the heavy traffic in cotton and other goods from the roads and streets to its proper place.

PHILIPPINE IRRIGATION.—The estimates submitted for the year 1910 amounted to over ₱1,200,000. This amount covers the Ambulangan-Dalin project, 67,500 acres, ₱800,000; Orion project, 2,250 acres, ₱37,000; Pototan project, 20,000 acres, ₱277,000; Barugo-Leyte project, ₱60,000; and the Polillo project, ₱5,000.

BANGKOK WATER SUPPLY.—The City Engineer, Bangkok Sanitary Department, has advertised for tenders for the supply of cast iron pipes and accessories for the city water-supply.

PEKING WATERWORKS COMPANY.—The announcement was made that this company would commence supplying water to the public on November 25th.

THE CANTON BUND.—The announcement is made of the completion of the Bund for a distance of a mile and one-half reaching the railway terminus of the Canton-Kowloon. This improvement is about 45 feet wide and is quite a relief to the inhabitants of this congested city. A T-shed wharf of reinforced steel construction, 60 feet wide and about 150 feet in length, has been completed by Messrs. Howarth, Erskine, Ltd., and will be used as the official landing.

CAUSEWAY BAY TYPHOON SHELTER.—The contractors having in hand the deepening of the bay announce that the contract will be completed by the end of the year. Over 1,000 laborers and 150 boats were employed daily on the work.

YAP WEATHER STATION.—The Philippines Weather Bureau will establish a station at Yap, Carolines.

SHIPBUILDING, MERCHANT MARINE AND FISHERIES

CHINA'S NAVIGATION EXPANSION.—The Board of Posts and Communications have recommended the appropriation of one million taels to be utilized in extending the transportation facilities in Chinese waters under the Chinese flag.

VLADIVOSTOK SHIPPING TRADE.—It is understood that the Russian Volunteer Fleet and the Osaka Shosen Kaisha have failed to come to an understanding in regard to rates and keen competition is anticipated from the beginning of the year 1910.

NEW JAPANESE TRAWLER.—The Kiyu Maru was launched from the Kubota Dockyard at Kanagawa in October and will be used by one of the largest fishery concerns in Otura for deep sea fishing. The vessel has a gross tonnage of 5,000, length 63 feet width 15 feet and draught 8 feet.

CABLESHIP FOR THE PHILIPPINE GOVERNMENT.—The steamer Manila, a vessel of 2,722 tons, has been purchased by the Bureau of Navigation for use as a cable ship to be used in laying new lines and repair work in the archipelago. The price paid was ₱165,000.

MOTOR SAMPAN AT HONGKONG.—The first attempt to utilize a motor in a sampan was successfully made at Hongkong the second of December. The vessel was built at the yard of Messrs. Ulderup & Schluter at Laichikok and is 32 feet in length, with beam 8 feet and depth 2.5 feet. The engines were supplied by Messrs. Fay and Bowen, New York. The trial covered a period of two hours making eight knots an hour during that period on 1.25 gallons kerosene per hour.

HONGKONG DOCKS BUSY.—The *South China Morning Post*, referring to the activity in repairing in the dockyards of Hongkong, says:

"Quite a little naval force is at Kowloon Docks at present. H. M. S. S. Hart, Virago, Taku and Fame are all there undergoing overhaul after their extended trip north. The Portuguese cruiser Rainha Amelia is also at the dock, and there might also be included in the count of "warships" the Chinese Revenue cruiser Likin. The docking of so many destroyers of the British navy has necessitated the re-opening of Cosmopolitan dock, where the H. A. L. steamer Ithaka is on the chocks. The other vessels at Kowloon (Hunghom) docks are the Haimun, Prominent, Kwongtung and Hilary, so that there seems to be an abundance of work in hand at present, though we are given to understand, that prices are very keenly cut in these strenuous days of competition. The Taikoo dock is also busy on the Kanchow, Anhui, Rajaburi, Tjiliwong and Canton, while the Naval Dock is occupied by H. M. S. Flora, the camber by H. M. S. Monmouth and other smaller vessels, and lying at her buoy waiting her turn is H. M. S. King Alfred. The smaller Chinese slips are also pretty fully occupied.

JAPAN'S NAVAL CONSTRUCTION.—Two large destroyers having a 1,150 tons displacement, 20,500 h. p. and speed of 33 knots each are being constructed at the Mitsu Bishi Shipbuilding and Engine Works, Nagasaki. They are to be fitted with turbine engines. These are reported to be 150 tons larger than any of the new destroyers being built for the British Navy. In addition to these vessels two of the newest type of Dreadnoughts will be added to the Japanese navy at an early date. One of these battleships having a displacement of 19,350 tons is being built at the Yokosuka Naval Dock and the other with a displacement of 19,800 built at the Kure Naval Docks will go into commission early next year. There are also two cruisers of modern construction to be added to the list.

KOREA COAST DEFENCE VESSELS.—Recently the Mihara Shipbuilding Dockyard at Osaka secured an order for the construction of 16 steamers from the Korean Government. These vessels will be used for coast patrol service and will be ready for delivery next September.

JAPANESE SUBMARINE INVENTION.—A young Japanese named Koda Seihichi is reported to have applied for a patent on an instrument which he claims will direct the movements of a fish torpedo or submarine boat without the services of an engineer. A test is said to be arranged off Shinagawa for the present month.

PEARLING GROUNDS IN SAGHALIEN.—Japanese fishermen report the discovery of large beds of pearl oysters on the southern coast and that the rare black pearls of the best quality are realized there in large quantities. There is also a yellow variety found that is believed to be very valuable.

MOTOR BOAT FOR WEST RIVER.—A shallow draft boat length 75 feet was delivered by the firm of Kwong Fook Cheung, Samshui-po, early this month. It is equipped with a 75 b. h. p. Gardner kerosene engine. Another boat of the same order has been ordered for the same run and two more for Canton and Pakhoi.

OSAKA SHOSEN KAISHA AND THE C. M. AND ST. P. RY. LINE.—Mr. G. H. Corse, jr., representative of this line, has concluded arrangements with Messrs. W. F. Stevenson & Co. of Manila to represent the line at that port and the Philippines. Headquarters for the Far East will be at Shanghai permanently.

PHILIPPINE COASTWISE RATES.—A committee of which the Collector of Customs is chairman has been appointed to make an investigation into the rates charged for freight and passengers in the coastwise carrying trade and to make recommendations as to advisable changes.

BANGKOK MOTOR BOAT RACES.—The motor boat has invaded Siam perhaps more effectually than any other part of the East. The use of this pleasure vessel is endorsed by the Royal Family. Her Majesty, the Queen of Siam, recently ordered a six cylinder Napier Chassis. On the 19th of the present month there will be a series of motor boat races and some idea of the various kind of motors may be gathered by the division of the competing boats into the following classes:

1. Unrestricted.
2. 6 cylinders the diameter not to exceed 130 millimeters
3. 6 cylinders the diameter not to exceed 115 millimeters, or
   4 cylinders the diameter not to exceed 130 millimeters
4. 4 cylinders the diameter not to exceed 115 millimeters
5. 4 cylinders the diameter not to exceed 102 millimeters
6. 4 cylinders the diameter not to exceed 81 millimeters, or
   2 cylinders the diameter not to exceed 115 millimeters
7. 2 cylinders the diameter not to exceed 81 millimeters, or
   1 cylinder the diameter not to exceed 115 millimeters

MILITARY FERRY CONTRACT AT MANILA.—Messrs. Poizat and Gray have been awarded the contract by the Chief Quartermaster for handling passengers between Manila, Corregidor, El Fraile and Carabao Islands.

The steamer will leave daily from Magallanes landing at 7 a. m. for Corregidor calling at El Fraile and Carabao Islands on Monday, Wednesday and Friday and at Sisiman and Mariveles on Tuesday, Thursday, Saturday, and Sunday.

TONKIN FISHERIES.—During the first six months of 1909 the export of fish from Tonkin amounted to 1,449,329 tons, of which 1,386,288 was shipped from Cac-ba alone for China. Cac-ba is an island situated at the entrance to the port of Haiphong, and the industry is practically in the hands of Chinese.

PHILIPPINE REVENUE CUTTERS.—The Collector of Customs has renewed his recommendation for the purchase of two fast revenue cutters to cost about ₱40,000 to be used in preventing smuggling in the southern islands.

CARNIVAL RATES FROM HONGKONG TO MANILA.—The China-Manila line has announced a cut rate of ₱50 round trip from Hongkong to Manila during the Carnival in February.

MINING, MINERALS AND THE METAL TRADE

SARAWAK GOVERNMENT COLLIERIES.—Arrangements have been made by these collieries to supply coal at Labuan and Brooketon to all vessels. It is said that the product is of good quality and that the facilities for accommodating vessels are the best.

F. M. S. MINING LABOR.—For the year ended June 30th, 1909, the total number of miners employed in the F. M. S. was 195,081, of which 146,507 were employed in the open and 20,249 underground.

BURMA MINING.—The output of the Burma Mines, Ltd., for the month of October was 2,900 ounces of silver and 542 tons of lead. The new blowing plant that arrived in September was installed and tested with good results. The export from these mines via Rangoon to London was 580 tons of lead and 2,900 ounces of silver.

MINING IN SIAM.—The output of tin from the provinces of Nakon Sritamarat and Patani so far as can be learned was approximately the value of $10,000 gold. There are three gold mines worked in Patani near Tomoh, says H. B. M. Vice-Consul, Mr. Wood, who also adds that the gold is found in small veinlets of quartz in country rock.

KOREAN IRON MINES.—Arrangements for the working of the Chairyong and Eunyui iron mines heretofore under the control of the Korean Government have been concluded by the Japanese Government and the management will be placed under the direction of the Edamitsu Iron Foundry. A royalty will be paid Korea.

OIL REFINING PLANT FOR SAGHALIEN.—A German Company is reported to have secured a concession to work oil deposits on the island and will instal a plant with a capacity of a million cases of kerosene and an equal amount of crude petroleum annually. Two wells will be operated and a pipe line installed to carry the product, at least 20 miles in length. The capital of the company is reported to be $900,000 gold.

MINERAL OUTPUT OF JAPAN.—The official report covering the first eight months of 1909 show an output of 65,760 ounces of gold; 2,459,280 ounces of silver; 69,332,817 pounds of copper; 8,314,200 tons of coal; 40,280,000 gallons of petroleum and 50,000,000 pounds of sulphur. This shows an increase in every branch of mining activity compared with the previous term.

BORNEO COAL.—The report of the British North Borneo Company contains the information that the output of the Cowie Harbor Company amounted to 25,120 for the year 1908.

CEMENT FACTORY AT PORT SWETTENHAM.—The announcement is made that Director D. G. Robertson of Messrs. Robertson & Co. is expected to undertake the construction of the proposed Portland Cement factory at this point early next year.

BAIKAL OIL FIELDS.—French capitalists are interested in the development of the oil deposits in this region.

BATAN COAL MINES.—These mines are now turning out 6,000 tons a month and the demand for the product already exceeds the supply. The Manila Electric Railroad and Light Company has placed an order for a continued supply of this coal for its plant in Manila.

THE CEBU COAL FIELDS.—The prospect for the development of the coal deposits of Danao are brighter than at any previous time. A report from New York is to the effect that the necessary capital has been pledged to make the enterprise a success The coal is of good quality and has been used successfully by inter-island steamers.

SHANSHI MINING DEVELOPMENT.—Advices from New York are to the effect that the United States Steel Corporation are negotiating for the control of the iron and coal deposits of this province.

FORMOSAN COAL.—Official reports place the area of coal fields in Formosa at about 35,000,000 square meters with an estimated deposit of 30,000,000 tons.

THE MIIKE MINES.—The output of these mines for October amounted in rough numbers to 138,000 tons.

MANCAYAN COPPER DEAL.—The largest deposit of copper in the Far East is that known as the Mancayan mine in Lepanto, Philippine Islands. The deposits were worked by the Spaniards and over a thousand tons of copper were taken out yearly at one time. Since American occupation the smelter was burned by the Insurgents and active work was not resumed. American prospectors have occupied the property and the Lepanto Mining Company has been interested in the option of the property. A contract was recently signed with a German Company under which the Lepanto Mining Company bonded the property under its control which includes 11 claims and fractions for a period of six to nine months. Experts are now investigating the property and it is not improbable that a deal will be closed for purchase and the development of this group. Negotiations are also being carried on with other owners of property at Mancayan with a view to including adjacent groups in the German deal. The deposits are very valuable and have been most favorable reported upon several times. Transportation to the coast seems to be the greatest item of expense to be considered, but there is reason to believe that the large body of ore of high grade available would more than warrant the investment.

PHILIPPINE PLACER PROPERTIES.—There are a number of deals pending covering the control of rich placer ground in different sections of the islands and the year 1910 promises unusual activity in this field of endeavor. All the placer properties being developed at the present time are giving unusual returns on investment and the tests made on the new properties are far from discouraging.

FINANCIAL, COMMERCIAL AND MISCELLANEOUS

THE MITSUI COMPANY, LTD.—At a meeting of the newly organized company in October the following officers were elected for the different departments of the company:

Mitsui Joint Stock Partnership:—

President—Baron H. Mitsui; Partners—Messrs. Hachirojiro Mitsui, Saburosuke Mitsui, Takayasu Mitsui; Adviser—Mr. Takashi Masuda; Auditors—Messrs. Gen-yemon Mitsui and Tokuyemon Mitsui; Councillors—Messrs. Takuma Dan, Eiji Asabuki, Shogoro Hatano, Nagafumi Ariga, Sankichi Komuro, Morinosuke Mitsui and Nagatumi Ariga.

Mining Department:—

Chief—Mr. Saburosuke Mitsui; Managing Director—Mr. Naonobu Yamada; Director—Mr. Yoshio Takanashi.

Mitsui Bank, Limited:—

President—Mr. Takayasu Mitsui; Business Manager—Messrs. Senkichiro, Hayakawa, Narishige Ikeda, Umekichi, Yoneyama; Directors—Messrs. Morinosuke Mitsui, Takuma Dan, Giichi Iida, Ken Hayashi; Auditors—Messrs. Takenosuke Mitsui, Eiji Asabuki and Tomojiro Ono.

Mitsui Bussan Kaisha, Ltd.:—

President—Mr. Hachirojiro Mitsui; Directors—Messrs. Giichi Iida, Senjiro Watanabe, Kenzo Iwahara, Kikusaburo Fukui, Senkichiro Haya-Iwahara —ikusaburo Fukui, Senkichiro Hayakawa, Eiji Asabuki, and Sankichi Komuro; Auditors—Messrs. Tokuyemon Mitsui, Takuma Dan and Ken Hayashi.

FORMOSA SUGAR INDUSTRY.—The production of sugar at the present time is equal to one-fourth the consumption of Japan and plans have been completed to instal an additional 30 mills having a capacity in all of 4,450 tons daily.

MANCHURIA SILK EXPORT.—The yield for the year will reach a value of yen 5,500,000 in wild silk cocoons.

TOBACCO FACTORY AT SEOUL.—The East Asia Tobacco Factory proposes installing a factory at Seoul which will give employment to over 4,000 operators for the purpose of dominating the Manchurian market.

CHAMBERS OF COMMERCE IN JAPAN.—At the end of last year there were in Japan fifty-eight Chambers of Commerce, with a total of 1,741 members, the expenses required amounting to ¥325,568.

NEW RUBBER COMPANIES.—Kwala Mersing, Ltd., (Johore), capital $700,000, shares $5; Lendu Rubber Co., Ltd., capital £60,000, £1 shares, 47,000 issued; Lumut Rubber Estates, Ltd., capital £220,000, £1 shares, 150,000 issued; British North Borneo Plantations, Ltd., £3,100, 3,000 shares at £1 and 100 at 1s. each; Kimanis Rubber Co., Ltd., £150,000, 100,000 shares guaranteed and 50,000 without guarantee, £1 each; Sungei Buaya Rubber Co., Ltd., capital £75,000 in £1 shares; Tamiang Rubber Estates, Ltd., capital £120,000, £1 shares; Merliman Rubber Estates, Ltd., capital £210,000, shares 2s.; issued 1,750,000; Eow Seng Rubber Co, Ltd., capital £21,000, 15,000 ordinary and 6,000 debenture shares; Carey United Rubber Estates, Ltd., capital £150,000, £1 shares; Lingen (Java) Rubber Estates, capital £100,000; Estates of Kedah, Ltd., capital £120,000, shares 2s. each; Krubong (Malacca) Rubber Plantation Co., Ltd., capital £20,000, £1 shares, issued 13,666; Batang Benar Rubber Co., Ltd., capital $250,000, shares $10 each; Sungei Krian Rubber Estates, Ltd., capital £75,000, 57,000 6% cumulative and 18,000 ordinary shares; Batu Kawan Rubber and Cocoanut Plantations Co., Ltd., capital £80,000, 63,500 shares issued at £1; Mala, States Planting and Investment Co., Ltd., capital $150,000, shares $100 each.

MONGOLIAN BUTTER.—According to Consul General Hunter of Moscow Mongolian butter is marketed at Harbin at about 15 cents gold a pound as against Siberian butter at 20 cents gold a pound. It is believed that Mongolia will become a serious competitor as against Siberia owing to the large herds of cattle and the cheapness of labor in that territory.

CHINA'S POSTAL SERVICE.—This system now includes 3,493 post offices and over 90,000 miles of postal routes. It might be said that the entire system was developed during the last eight years.

KOBE TEA TRADE.—The export of tea from this port averages over 7,000,000 pounds a year, most of which is grown in Yamato and Yamashiro.

AMALGAMATION OF RUSSIAN-CHINESE BANK AND CHINESE EASTERN RAILWAY INTERESTS.—The Japanese press are interested in the reported amalgamation of these two interests and it is claimed that most of the objections to the merger are now removed.

CEYLON RUBBER EXPORT.—The value of Ceylon grown rubber exported for the first nine months of 1910 was Rupees 4,093,227. This is almost double the value of the export for the same period last year.

JAPAN'S SUGAR IMPORT.—The import last year was valued at 19,000,000 yen while for the first six months of 1910 it amounted in value to yen 5,090,000. The decrease is largely due to the increase of Formosan sugar production which last year amounted in value to yen 9,500,000. It is expected that the production of sugar in Formosa within the next eight years will be sufficient to meet the consumption in Japan.

F. M. S. RUBBER EXPORTS.—The total export for the first nine months of 1909 amounted to 4,050,282 pounds as against 2,127,489 pounds last year.

CABLE RATES.—The following press cable rates went into effect on the Great Northern Telegraph Company's lines in October: Great Britain to China, 1s. 5½d., Great Britain to Hongkong, 1s. 5½d.; Great Britain to Philippines—Luzon 1s. 5½d., Visayas 1s. 7½d., Great Britain to Japan, Formosa and Korea, 1s. 7d.

TAPIOCA MILL IN MINDANAO.—A tapioca mill has been installed on the Holmes Plantation on the island of Lapac and a fine product is being turned out.

FORMOSAN HEMP MANUFACTURING COMPANY.—The Government of Formosa has sanctioned the payment of a subsidy of yen 10,000 annually to this company to encourage the industry in the island.

NEGROS SUGAR SYNDICATE.—The Sugar Brokers held a meeting recently in Bacolod, Negros, and among other business in the interest of the industry proposed the organization of a syndicate with ₱2,000,000 capital to exploit the cane fields and sugar industry in the Philippines.

FORMOSA'S POPULATION.—The total population of the island is about 3,200,000 of which 12,000 are foreigners.

HONGKONG SHANGHAI BANK.—A branch of this bank will be opened soon at Kuala Lumpur.

PHILIPPINE SUGAR EXPORT REGULATION.—An executive order providing for regulations for the proper and practical enforcement of the provision of the Payne Bill limiting the amount of sugar to be admitted into the United States, has been issued by the Executive Bureau requiring that all producers of sugar desiring to avail themselves of the privileges of free entry of sugar into the United States, either directly or indirectly, shall file with the Collector of Internal Revenue, in such form and manner as said Collector shall prescribe, written applications therefor before the opening of the shipping season and not later than the first day of November in each year. Each such application shall contain a statement under oath of the applicant, setting forth the quantity of sugar produced, or proposed to be produced, by such applicant during the fiscal year in which the application is made, the place and manner of production, the area of land employed, or to be employed, by such applicant, if any, its location, the quantity of sugar for which the applicant desires free entry and will ship, or intends to ship, or sell for shipment to the United States, that said sugar has been or will be actually produced by said applicant and such other data as may, from time to time, be required by the Collector of Internal Revenue.

ELECTRIC LIGHT AND POWER PLANT FOR BAGUIO

The Electrical Supply Company, Inc., of Manila was awarded the franchise for the installation of an electric light and power plant at the city of Baguio, Benguet, the summer capital of the Philippine Islands. A temporary plant will be installed by March 15th, steam power being utilized for the generation of current, but the permanent plant will be run by water power developed on the Bued River. The permanent plant will have a capacity of 4,000 lamps of which the installation of 2,200 will be made at once. The plant will supply the municipality of Baguio, the insular government buildings, Camp John Hay with light and power, while the mining and lumbering industries offer inducement for the development of a large supply of power in the near future in that region. Under the franchise the company engages to supply light at 26 centavos a kilowat hour. The cost of installation is estimated at about ₱65,000.

COLD STORES FOR THE MERCHANT MARINE

The special Marine Department of the International Cold Stores, Manila, P. I., is one of the most important under the direction of this company, and has added greatly to the desirability of Manila as a port of call. The increased trade of the department in supplying ships with fresh meats of all kinds, fish, dairy products, vegetables and fruit, has been greater than anticipated and from time to time an increase in the number of vessels making Manila a base of supply is increasing. The cold storage area controlled by the company averages about 32,000 cubic feet and the business for the year estimated from the last six months returns will reach over ₱1,000,000.

The International Cold Stores make a special feature of handling vegetables grown in the hills of Benguet with great success.

NEW INSURANCE PUBLICATION

The Shield is a neat monthly publication issued under the auspices of the China Mutual Life Insurance Co., Ltd., from its Shanghai office. The first issue contains several illustrations including a street scene in Shanghai, the new home of the company at Shanghai and photographs of Mr. Zia Saul Lang and Mr. Lee Yung Su, the former one of the organizers and the latter one of the present directors of the company. There is also a reproduction of a photograph of Mr. Lefferts Knox, District Manager of the company for Hongkong, Macao, Canton and the Philippines. *The Shield* is a credit to the publishers, and Editor Prescott is to be congratulated.

GOLD DREDGING OPPORTUNITIES

Parties with Gold Dredging Plant desirous of engaging in the development of rich Gold Placer Properties in the Philippines would find it to their interest to communicate with the undersigned.

We have Gold Placer Ground with proven values and are prepared to make liberal arrangements with responsible parties.

SQUIRES, BINGHAM & Co.,
Manila, P. I.

PURCHASE OF LARGE TRACT OF SUGAR LANDS

The purchase of the San José Estate, a tract of 55,000 acres included in the Friar Estates purchased by the Philippine Government, by American capitalists represented by Mr. E. L. Poole and Mr. P. R. Prentiss, recently concluded, is the first large deal as a result of the operation of the Payne Bill and gives promise of activity in the application of modern methods to the sugar industry in the Philippines. The price paid for the land was ₱734,000 or approximately ₱14 per acre. The capitalists behind the venture are interested in the sugar industry in Cuba and the contract for the purchase was not concluded until a careful investigation was made of the character of the soil and local conditions, so that the deal may be taken as evidence of favorable prospects for capital in the development of this insular industry.

The lands are located on the South West of the island of Mindoro commanding a splendid harbor and Mr. Poole has been making a survey with a view to selecting a site for the plant, building and docks.

The installation, if the present plans are carried out, will very probably duplicate the large plant controlled by these people in Cuba which includes a seven foot mill, nine rollers and crusher with a capacity of about 1,500 tons of cane daily. The investment will reach over ₱1,500,000. It is expected that the company will be prepared to begin operations in full blast within two years.

*LONDON, ENGLAND, METAL MARKET

**The following are November 19th prices of metals:—

		£	s.	d.		£	s.	d.
COPPER								
*Tough cake and Ingot		62	10	0	..	64	10	0
*Best Selected		63	10	0	..	64	10	0
*Electrolytic		64	10	0	..	65	0	0
*Sheets and sheathing		74	0	0	..	—		
*Flat bottoms		77	0	0	..	—		
STANDARD	†Cash	60	12	6	..	60	15	0
	†Three Months	61	15	0	..	61	17	6
*Copper tubes, seamless per lb		0	0	8½	..	—		
*Lake		65	0	0	..	65	10	0

* Less 3½ per cent. † Net.

ALLOYS.								
BRASS: Wire		0	0	6¾	..	—		
,, Tubes (solid drawn)		0	0	6⅞	..	—		
,, Sheets		0	0	7	..	—		
TIN.								
English ingots, f. o. b		138	10	0	..	139	10	0
,, bars		139	10	0	..	140	10	0
,, refined		140	10	0	..	141	10	0
Straits	Cash	141	15	0	..	142	0	0
	Three months	143	17	6	..	144	2	6
Australian spot		141	15	0	..	142	5	0
Banka (in Holland)	Cash	141	5	0	..	—		
	Three months	141	10	0	..	—		
LEAD.								
Spanish or soft foreign		13	2	6	..	13	3	9
English pig, common		13	7	6	..	13	12	6
,, L. B		13	17	6	..	—		
,, sheet and bar lead		14	7	6	..	—		
,, pipe		14	17	6	..	—		
,, red		16	2	6	..	—		
,, white		17	15	0	..	—		
,, patent shot		16	7	6	..	—		
SPELTER.								
Silesian ordinary brands		23	0	0	..	23	5	0
,, special brands		23	10	0	..	24	0	0
English Swansea								
Sheet zinc		25	15	0	..	—		
ANTIMONY.								
Antimony		29	0	0	..	30	0	0
,, Crude		13	0	0	..	14	0	0
,, Ore (basis 50%)		8	0	0	..	9	0	0
QUICKSILVER.								
Flasks, 75 lbs, warrants		9	15	0	..	9	17	6

MANGANESE. Ore, c.i.f., U. K. ports.	Per unit.*				Per unit.*		
Indian & Brazilian, 48 per cent.	0	0	9½	..	0	0	6½
,, ,, 45 ,,	0	0	9¼	..	—		
,, ,, 40 ,,	0	0	8¼	..	—		
Caucasian, 48 per cent. ..	0	0	7½	..	0	0	8

* Unit corresponds to 1 per cent.

	Per ton.				Per ton.		
ALUMINIUM. 98-99 per cent.	67	10	0	..	70	0	0
NICKEL. 98-99 per cent. guaranteed	167	10	0	..	171	0	0

PLATINUM.

Per oz. Troy, 120s. nominal and subject to negotiation.

Mining Journal.

HEMP STATISTICS, 30th NOVEMBER, 1909.

(Courtesy of C. S. NICHOLSON, *Secretary, Manila Chamber of Commerce.)*

EXPORT OF HEMP, NOVEMBER, 1909.

Date	*Vessel*	*London*	*L'pool*	*Atlantic U.S.*	*Pacific East & California*	*Continent.*	*Australia*	*Other Pts.*	*Total Bales*
1909	Forward:—	224,121	111,198	549,027	110,190	50,277	15,481	26,664	1,086,958
Nov. 1	Yawata Maru	.....	.....	.....	.....	.....	1,975	.....	1,975
" 5	Monmouthshire	11,464	305	.....	.....	2,245	.....	.....	14,014
" "	Loongsang	.....	.....	.....	.....	.....	.....	300	300
" 9	Kumeric	.....	.....	.....	5,020	.....	.....	.....	5,020
" "	Indrasamha	.....	.....	18,609	.....	.....	.....	.....	18,609
" "	Coblenz	.....	.....	.....	.....	.....	125	.....	125
" "	Taming	.....	.....	.....	.....	.....	.....	250	250
" 10	Changsha	.....	.....	.....	.....	.....	250	.....	250
" 11	Empire	.....	.....	.....	.....	.....	.....	400	400
" 12	Yuengsang	.....	.....	.....	.....	19	.....	150	169
" 13	Zafiro	2,050	1,000	.....	.....	650	.....	.....	3,700
" "	Sungkiang (Cebu)	.....	1,550	.....	.....	.....	.....	50	1,600
" 17	Tean	.....	1,250	.....	.....	500	.....	.....	1,750
" 18	Cyclops	8,147	400	.....	.....	1,700	.....	.....	10,247
" 19	Loongsang	.....	.....	.....	.....	650	.....	.....	650
" 20	Rubi	.....	.....	.....	.....	.....	.....	600	600
" "	Kumano Maru	.....	.....	.....	.....	.....	.....	120	120
" 26	Yuensang	1,203	140	.....	.....	453	.....	.....	1,796
" 27	Zafiro	1,029	.....	.....	.....	856	.....	500	2,385
" 28	Ningchow	.....	.....	.....	1,250	.....	.....	.....	1,250
" 23	Kaifong (Cebu)	.....	750	.....	.....	.....	.....	.....	750
" 29	Nikko Maru	.....	.....	.....	.....	.....	412	.....	412
" 30	Alicante	.....	250	.....	.....	121	.....	.....	371
		248,014	116,743	567,636	116,460	57,471	18,243	29,034	1,153,701

FAR EASTERN STOCKS AND QUOTATIONS

Courtesy of Messrs. Kadoorie & Co., Hongkong, December, 1909.

STOCK.	WHEN ESTABLISHED	CAPITAL	NO. OF SHARES	VALUE	PAID UP	RESERVE	AT WORKING ACCOUNT	DATE	LAST DIVIDEND.	Approximate Yield per cent per annum at Present Quotation	CLOSING QUOTATIONS.
BANKS.											
Hongkong & Shanghai Banking Corporation	1865	$15,000,000	120,000	$125	$125	g £1,500,000; e $15,250,000; i $250,000	$2,001,819	30-6-09	Interim of £2 for account 1909, @ ex 1/9 1/2 = $22.72	4	995 sales £91.9
National Bank of China, Ld.	1891	£699,475	10) 99,925	£7	£6	c £4,029 $300,000	$30,552	31-12-08	$2 (London 3/6) for 1903	—	$65 buyers
MARINE INSURANCES.											
Canton Insurance Office, Ld.	1881	$2,500,000	10,000	$250	$50	$1,560,000; j $254,583; u $302,799	Nil.	31-12-08	$10 for 1908	7	$160 sellers
North China Insurance Co., Ld.	1863	£150,000	10,000	£15	£5	g £125,000; s Tls. 150,000; u Tls. 303,747; f Tls. 118,277	Tls. 160,512	30-6-08	Interim of 7/6 for % 1907	....	Tls. 110 buyers
Union Ins. Society of Canton, Ld.	1867	$3,100,000	12,400	$250	$100	s $3,000,000; g £90,000; f $192,248; j £105,249; u $682,609	$2,464,901	31-12-08	Final of $17 making $47 for 1907, and interim of $30 for account 1908	5½	$880 buyers
Yangtsze Ins. Association, Ld.	1862	$1,200 000	12,000	$100	$60	$1,000,000; j $294,405; f $199,234	$707,637	31-12-08	$12 and bonus $3 for 1907	7	$220 buyers
FIRE INSURANCES.											
China Fire Ins. Co., Ld.	1870	$2,000,000	20,000	$100	$20	$1,000,000; x $438,668; f $13,802	$375,314	31-12-08	$6 and bonus $2 for 1907	7	$114 buyers
Hongkong Fire Ins. Co., Ld.	1868	$2,000,000	8,000	$250	$50	$1,438,173	$368,711	31-12-08	$27 for 1907	7½	$375 sellers
SHIPPING.											
China & Manila Steamship Co., Ld.	1882	$750,000	1) 30,000	$25	$25		Dr. $21,538	31-12-08	$1 for 1906	....	$8 sellers
Douglas Steamship Co., Ld.	1883	$1,000,000	20,000	$50	$50	$230,000; b $100,589	Nil.	30-6-09	$2½ for year ending 30-6-08	....	$33
Hongkong, Canton & Macao Steamboat Co., Ld.	1865	$1,200,000	80,000	$15	$15	e $250,000; d. i. $617,500; f $119,267; $ 22,645	$21,170	30-6-09	Interim of $1½ for a/c 1909	7½	$30½ sa. & b
Indo-China Steam Navigation Co., Ld. (Preferred)	1882	m £600,000	2) 60,000	£5	£5	i £148,891	£15,162	31-12-08	6/- for 1907 on pref. shares only at ex. 1/9 11/16, $3.154	....	$60 buyers
Do. Do. (Deferred)			2) 60,000								
"Shell" Transport & Trading Co., Ld.	1898	£ 2,000,000	2,000,000	£1	£1	£720,000; i £100,000	£192,994	31-12-08	Final of 2/- for 1908 & int. of 1/- for a/c 1909	....	69/6 buyers
"Star" Ferry Co., Ld.	1898	$200,000	10,000	$10	$10	$65,000; i $48,980	$31,21	30-4-09	$1.00 50 cts. for year ended 30-4-09	4 3½	$26 sales $14½
	1900		10,000	$10	$5						
REFINERIES.											
China Sugar Refining Co., Ld.	1878	$2,000,000	20,000	$100	$100	p $350,000; r $56,848	Dr. $5858	31-12-08	$5 for year ending 31-12-08	3½	$159
Luzon Sugar Refining Co., Ld.	1882	$700,000	7,000	$100	$100	none	Dr. $135,893	31-12-08	$3 for 1897	....	$21½ sales
Perak Sugar Cultivation Co., Ld.	—	Tls. 350,000	7,000	Tls. 50	Tls. 50	Tls. 100,000	Dr. Tls. 6,302	31-8-09	Tls. 0 for year ending 31-8-09	....	Tls. 350 s. e. d
MINING.											
Chinese Engineering & Mining Co., Ld.	1901	£1,000,000	1,000,000	£1	£1	d £215,000; h £12,289	£1,435	28-2-09	Final of 1/6 making 3/- for 09	7	Tls. 19,30 sales
Raub Australian Gold Mining Co., Ld	1892	£200,000	150,000	£1	18-10	£4,873	Dr. £2,191	31-3-08	No. 12 of 1/- = 48 cents	—	$7½ sellers
			50,000	£1	£1						
DOCKS, WHARVES AND GODOWNS.											
Fenwick (Geo.), & Co., Ld.	1889	$450,000	s 18,000	$25	$25	$42,986	Dr $7,421	31-12-08	$1½ for year ending 31-12-06	....	$12
Hongkong & Kowloon Wharf & Godown Co., Ld.	1886	$3,000.000	60,000	$50	$50	$550,000; t $26,805; q $40,000	$30,102	31-12-08	Final of $1½ making $3½ for 1907	—	$62 sellers
Hongkong & Whampoa Dock Co., Ld.	1866	$2,500,000	50,000	$50	$50	i $88,442; v $221,000	$345,162	30-6-09	Interim of $1½ for account 1909	..	$51 sellers
Shanghai Dock & Engin'g Co., Ld.	1903	Tls. 5,570,000	13) 55,700	Tls. 100	Tls. 100	Tls. 1,000,000	Tls. 6,261	30-4-09	Final of Tls. 2½ for year ending 30-4-1909	6½	Tls. 75 buyers
Shanghai & Hongkew Wharf Co., Ld.	1902	Tls. 3,600,000	36,000	Tls. 100	Tls. 100	b Tls. 697,257; r Tls. 50,000; e Tls. 125,000	Tls. 6,261	31-12-08	Final of Tls. 6 making Tls. 10 for 1908	7	Tls. 128 buyers
LANDS, HOTELS AND BUILDINGS.											
Anglo-French Land Investment Co., Ld.	1906	Tls. 2,500,000	3) 25,000	Tls. 100	Tls. 100	Tls. 35,000	Tls. 4,314	29-2-09	Tls. 6 for year ending 29-2-09	5½	Tls. 105 buyers
Central Stores, Ld.	—	$751,845	16) 50,123	$15	$15	n. $1,000	$24,641	31-12-08	$1.20 on old & 60 cts. on first new issue	....	$17 sellers
Hongkong Hotel Co., Ld.	1866	$800,000	12,000	$50	$50	$348,975	$19,272	30-6-09	Interim of $2.40 old and 1.40 cents new for a/c 1909	—	$75 sales
		$400,000	8,000	$50	$25	r $140					$43½ new i. b.
Hongkong Land Investment & Agency Co., Ld.	1889	$5,000,000	50,000	$100	$100	e $250,000	$26,475	31-12-08	Interim of Tls. 3½ for a/c 1909	6½	$103 sales
Humphreys' Estate & Finance Co., Ld.	1887	$1,500,000	150,000	$10	$10	i $222,172; 20) $43,261	$5,486	31-12-08	60 cents for 1908	6½	$9 sellers
Kowloon Land & Bldg. Co., Ld.	1889	$300,000	6,000	$50	$30	none	$278	31-12-08	$1½ for 1908	5	$30 sellers
Shanghai Land Investment Co., Ld.	1888	Tls. 3,900,000	78,000	Tls. 50	Tls. 50	Tls. 1,523,045; e Tls. 360,000	Tls. 142,404	31-12-08	Interim of Tls. 3 for 1909	6½	Tls. 120 sales
West Point Bldg. Co., Ld.	1889	$625,000	12,500	$50	$50	none	$1,968	31-10-08	Interim of $2 for a/c 1909	8½	$44 sales
COTTON MILLS.											
Ewo Cotton Spinning & Weaving Co., Ld.	1895	Tls. 1,000,000	5) 20,000	Tls. 50	Tls. 50	Tls. 250,000; Tls. 40,008	Tls. 10,991	31-7-09	Tls. 11 for year ended 31-10-09	3½	Tls. 129 b. e. d.
Hongkong Cotton Spinning, Weaving & Dyeing Co., Ld.	1901	$1,250,000	125,000	$10	$10	e $20,000	$26,297	30-7-09	50 cents for year ending 31-7-09	..	$6 buyers

FAR EASTERN STOCKS AND QUOTATIONS—(CONTINUED.)

STOCK.	WHEN ESTABLISHED	CAPITAL.	NO. OF SHARES.	VALUE.	PAID UP.	RESERVE	AT WORKING ACCOUNT.	DATE.	LAST DIVIDEND.	Approximate Yield per cent. per annum at Present Quotation	CLOSING QUOTATIONS
International Cotton Manufacturing Co., Ld.	1895	Tls. 750,000	6) 10,000	Tls. 75	Tls. 75	Tls. 175,000	Tls. 8,372	30-9-09	Tls. 7½ for year ending 30-9-09	....	Tls. 77½ ex. div.
Lacu-kung-mow Cotton Spinning & Weaving Co., Ld.	1895	Tls. 800,000	8,000	Tls. 100	Tls. 100	none	Tls. 4,829	31-12-08	Tls. 4 for 1908	....	Tls. 106
Soy Chee Cotton Spinning Co., Ld	1895	Tls. 1,000,000	2,000	Tls. 500	Tls. 500	Tls. 31,172	Tls. 15,911		Tls. 50 for 1905	....	Tls. 450
MISCELLANEOUS.											
Bell's Asbestos Eastern Agency, Ld.	1895	£5,377.10s	11) 8,604	12/6	12/6	£1,500	£682	31-12-08	15% for 1908	....	$10
China-Borneo Co., Ld.	1903	$720,000	8) 60,000	$12	$12	$40,000	Nil.	31-12-08	$1.20 for 1908	10	$12½ sales
China Light & Power Co., Ld.	1901	$550,000	50,000	$10	$10	none	$61,138	28-2-07	60 cents for year ending 28-2-06	....	$6 buyers
Do. do. Special Shares	1907		(17)50,000	$1	$1						
China Provident Loan & Mortgage Co., Ld.	1898 a	$1,250,000	7) 125,000	$10	$10	$100,000	$3,407	31-12-08	80 cents for 1908	....	$9½ sales
Dairy Farm Co., Ld.	1886	$300,000	40,000	$7½	$6	l $10,000	$1,850	31-7-09	$1.20 for year ending 31-7-09	8½	$16½ sellers
Green Island Cement Co., Ld.	1889	$4,000,000	400,000	$10	$10	$10,000 $13,000	$3,756	31-12-09	Interim of 35 cents for account 1909	10	$7½ sales
H. Price & Co., Ld.	1907	$120,000	19) 15,000	$10	$10	$5,000	$670	31-12-08	80 cents for year ending 31-12-08	8	$12
Hongkong Electric Co., Ld.	1889	$600,000	60,000	$10	$10	none	$5,195	29-2-09	$1.00 and bonus 20 cents for year ending 29-2-09	6	$20½ sellers
Hongkong Ice Co., Ld.	1881	$125,000	5,000	$25	$25	k $150,000	$7,616	31-12-08	Interim of $2 for a/c 1909	10	$180 sellers
Hongkong Rope Manufacturing Co., Ld.	1883	$600,000	$60,000	$10	$10	$20,000	$8,790	31-12-08	Interim of $1 for a/c 1909	8½	$22½ sales
Maatschappij tot Mijn-, Bosch- en Landbouwexploitatie in Langkat,	1902	Gs. 2,500,000	25,000	Glds. 100	Glds. 100	Tls. 547,500 i Tls. 63,914 21 Tls. 547,500	Tls. 316,682	31-10-08	Third quarterly dividend of Tls. 12½ for % 1909	8½	Tls. 730 sales
Peak Tramways Co., Ld.	1907	$750,000	25,000	$10	$10	$20,000	$2,204	30-4-09	80 cents on fully paid shares & 8 cents on $1 paid shares for year ending 30-4-09	6	$13
Do. (New)			50,000	$10	$1					3	$1.40
Philippine Co., Ld.	1904	$750,000	75,000	$10	$10	none	Ps. 18,640	31-12-08	None	....	$9½ buyers
Robinson Piano Co., Ltd.	1909	$200,000	22) 4,000	$50	$50	$5,000	$61,138	31-8-08	6% for ½ year ending 30.9.07	....	$50
Shanghai-Sumatra Tobacco Co., Ld.	1902	Tls. 600,000	9) 30,000	Tls. 20	Tls. 20	Tls. 24,820 w Tls. 75,000	Tls. 5,250	31-10-08	Final of Tls. 5 making Tls. 8 for 1908	4½	Tls. 111 buyers
South China Morning Post, Ld.	1903	$150,000	6,000	$25	$25	none	Dr. $56,602	31-8-08	None	....	$23½ buyers
Steam Laundry Co., Ld.	1902	$100,000	20,000	$5	$5	none	$63	31-5-09	40 cents for year ending 30-5-09	7	$5½
Union Waterboat Co., Ltd.	1905	$500,000	15) 50,000	$10	$10	none	$172	31-12-08	60 cents for year-end. 31-12-1908	5	$10½ sales
United Asbestos Oriental Agency, Ld.	1896	$100,000	10,000	$10	$4	$46,000	$342	31-5-09	60 cents per ordinary share for year ending 31-5-09	6½	$12½ buyers
Watson (A. S.) & Co., Ld.	1896	$900,000	90,000	$10	$10	$300,000 e $25,000	$2,613	31-12-08	Final of 30 cents making 60 cents for 1908	6½	$7½ sellers
Weismann Limited	1904	$17,500	175	$100	$100	$6,700	$13	31-7-07	10 per cent for year endg. 31.7.07.	....	$150
William Powell, Ld.	1901	$105,000	15,000	$7	$7	none	$782	30-6-09	Final of 30 cents making 80 cents for year ending June 30th 1906	....	$3 sellers
RUBBERS											
Anglo-Malay Rubber Co., Ltd.	1905	£150,000	1,500,000	2/-	2/-	....	....	....	Interim of 12½% for a/c 1909	....	14/3 sellers
Balgownie Rubber Estate, Ltd.	1905 ††	$200,000	‡‡ 20,000 ††	$10 ††	$10	$7,400	$11,205	31-3-09	20% Interim for 1909	....	$67½ b. [S'pore
Bashefield Rub. Ld., [fully pd.]	1906	£35,000	27) 32,650	£1	£1	none	....	....	.....	....	53/- sales
Damansara (Selangor) Rub. Co.	1905	£110,000	25 110,000	£1	£1	nil.	£2,220	31-12-08	2/6 for 1909	....	77/- sellers
Idcenda Malay Rubber Co.	1907	£80,000	26 80,000	£1	£1	nil.	nil.	....	.....	....	55/- sellers
Highland & Lnd. Para R. Co.			=181,454	£1	£1						62/6 buyers
Do. Do. [fully paid]	1906	£310,000	123,546	£1	15/-	£8,784	....	....	7½% for 1909 (interim.)	....	Nominal
Do. Do. [partly paid]			950,000	2/-	1/-						
Kamuning (Perak) Rb. & Tin Co.											4/-
do do A Shares	1909	£200,000	105,000	£1	£1	nil.	nil.	....	.....	....	
do do B Shares											Nominal.
Kuala Lumpur Rubber Co., Ltd.	1906	£180,000	180,000	£1	£1						
Linggi Plantations, Ltd. (ord.)	1895		+900,000	2/-	2/-	—	1,820	....	.....	....	8/- s. ex. div.
Do. Do. (7% pref.)	Account 1905	£100,000	10,000	£1	£1	£4,000	....	....	3% for year ending 30-6-08	....	25/6 sales
Lagalla Rubber Co., Ltd. (ord.)	1906					....	....	....	Interim of 40% = 9d for a/c 1909.	....	Nominal
Do. Do. (8% pref.)		†† $250,000	22,500 ††	$10 ††	$10	....	....	....	7% for year 1908	....	$26 s. [S'pore]
			2,500 ††	$10 ††	$10						Nominal
Lellury Rubber Estates Ltd.											45/6 sellers
Do. Do. (contrib.)	1908	£125,000	§§ 60,000	£1	£1	....	....	....	.....	....	23/-
Lagga Rubber Co. Ltd.	1903	£200,000	24) 20,000	£1	£1	nil.	nil.	....	.....	....	95/- buyers
Sandycroft Rubber Co.	1904	$100,000	1,000	$100	$100	$20,000	$1,275	31.1.08	Interim of 30% for 1909	....	$775 buyers
Sekong Rubber Co., Ld.	1908	£80,000	27) 80,000	£1	12/6	nil.	nil.	....	.....	....	19/- sellers
Selford Rubber State Ld.	1905	£65,000	65,000	£1	£1	nil.	£836	31.12.08	3% for 1908	....	32/- sellers
Singapore & Johore Rb. Co., Ld.	1903	$250,000	2,500	$100	$100	nil.	nil.	....	.....	....	$315 sellers
Tanget Chob. Rb. State Co., Ld.	1907	£45,000	45,000	£1	17/-	nil.	nil.	....	.....	....	32/6 buyer
Tangga Kapar Rubber Co.	1906	£110,000	23) 110,000	£1	£1	nil.	£3,448	31.12.08	8½% Interim for 1909	....	70/-

LOANS AND DEBENTURES.	AGENTS FOR THE LOAN.	AMOUNT OF LOAN.	PAR VALUE.	OUTSTANDING BONDS.	WHEN PAYABLE.	CLOSING QUOTATIONS.	
China Government, 7 per cent. Silver Loan 1895 E	Hongkong & Shanghai Banking Corporation.	Tls. 767,200	Tls. 250	1914	Mar. 31st and Sept. 30th each year until Mar. 31st, 1917	par.	Plus interest
Hongkong Hotel Company, Ltd., 6 per cent. Mortgage Debentures of 1899 ‡		$750,000	$500	§ all	Half yearly, June 30th and December 31st	par	
Shanghai & Hongkew Wharf Company, Ltd., 6 per cent. Debentures of 1902		Tls. 543,900	Tls. 100	.....	Half yearly, June 30th and December 31st	Tls. 103½	
Astor House Hotel Company, Ltd., 8 per cent. Debentures of 1903		Tls. 500,000	Tls. 100	.....	Half yearly, January 1st and July 1st	102½	
Chinese Engineering & Mining Co., Ltd., 6 per cent. Debentures of 1903 †	.....	£500,000	¶	£431,960	Half yearly, June 30th and December 31st	par.	
International Cotton Manufacturing Co., Ltd. 7% Debentures of 1901	Russo Chinese Bank	Tls. 500,000	Tls. 100	||	Half yearly, March 31st and Sept. 30th	Tls. 97½.

a Authorized capital $2,000,000.
b Building Reserve Account.
c Capital Reserve Fund.
d Depreciation Fund.
e Equalization of Dividend Fund.
f Exchange and Investment Fluctuation Account.
g Gold Reserve Fund
h Exchange Reserve Account.
i Insurance Fund.
j Reinsurance Fund.
k Contingencies Account.
l Legal Reserve Fund.
m Authorized Capital
n Sinking Fund.
o Raw Sugar Reserve Account.
p Premium on New Issue.
q Boiler Repairs and Renewals Account
r Repairs and Renewals Account.
s Silver Reserve Fund.
t Depreciation and Repair Account
u Underwriting Suspense Account.
v Special account
w Special Works Fund.
x Extra Reserve Fund.
y 72,500 owned by the Company.
z 7,200 shares unissued.
1 4 000 shares unissued.
2 First issue of 60,000 of which 10,411 unallotted.
3 5,000 shares unissued.
4 4,480 shares unissued.
5 5,000 shares unallotted.
6 1,616 shares unallotted.
7 75,000 shares unissued.
8 14,000 shares unissued.
9 17,000 shares unissued.
10 40,453 shares actually issued.
11 7,683 shares actually issued.
12 4,200 shares unissued.
13 500 shares unissued.
14 399 shares unissued.
15 22,277 shares unissued.
16 10,000 shares unissued.
17 Special shares are entitled to half of the profits.
18 Capital contributed by Chinese Government Kuping Tls. 5,000,000.
19 12,000 issued only.
20 Typhoon and Floods Insurance Fund
21 Special Cash Reserve.
22 1000 shares unissued.
23 10,000 shares unissued.
24 4595 part paid shares.
25 7,500 shares unissued.
26 10,000 shares unissued.
27 2,350 shares unissued.
* Based on last year's dividend.
** Based on present dividend.
§ 216 held by the Company.
|| Only Tls. 134,000 taken up.
¶ In certificates of £20 and £100.
‡ Redeemable in 10 years, or at option of Company, the Company giving 6 months notice.
† Redeemable at par at rate of £10,000 per annum from 31st December 1903 to 31st December 05.
*** Redeemable at par on 30th June, 1915.
Dr. Deficit.
†† Singapore dollars.
‡‡ 4,850 shares unissued.
× 16,756 shares unissued.
§§ 25,000 shares unissued.
— 4140 shares unissued.

ADDITIONAL SHANGHAI SHARE QUOTATIONS

STOCK	CLOSING QUOTATIONS	HIGHEST AND LOWEST PRICES DURING THE WEEK	CAPITAL	NO. OF SHARES	VALUE	PAID UP	RESERVE	LAST DIVIDEND	WHEN PAID
Oriental Consolidated Mining Co., Ltd	27s. 6d.		G. $5,000,000	500,000	G. $10	G. $10	none	Interim of Gold .50 for 1909	June 30, 1909
Vulcan Iron Works, Limited	Tls. 400		Tls. 500,000	1,000	Tls. 500	Tls. 500	—	Tls. 50 for year ended 31.8.06	Nov. 1, 1906
Yangtsze Wharf & Godown Co., Limited	Tls. 125 nominal		Tls. 250,000	2,500	Tls. 100	Tls. 100	Tls. 50,000	Tls. 15 for 1908	April 1, 1909
Wei-hai-wei Land & Building Co, Limited	Tls. 10 nominal		Tls. 91,850	3,674	Tls. 25	Tls. 25	—	—	—
Union Estate & Investment Co., Limited	Y. 105 sales		Y. 1,000,000	10,000	Y. 100	Y. 100	—	First year	—
Hotel des Colonies Company, Limited	Tls. 9 sellers		Tls. 112,500	9,000	Tls. 12½	Tls. 12½	Tls. 29,783	6% for 1907	May 29, 1908
Kalee, Limited	$100 nominal		$100,000	4,000	$100	$100	—	25% for 1908	July 3, 1909
Anglo-German Brewing Co., Limited	$85 buyers		$100,000	4,000	$100	$100	none	$7 for 1907	Mar. 12, 1908
Butler Tile Works, Limited	Tls. 50 nominal		Tls. 60,000	1,200	Tls. 50	Tls. 50	—	Tls. 3 for year ending 31.3.09	June 8, 1909
Major Bros, Limited	Tls. 40 sellers		Tls. 300,000	6,000	Tls. 50	Tls. 50	—	—	—
Oriental Ice Company, Limited	Tls. 50		Tls. 130,000	2,600	Tls. 50	Tls. 50	—	First year	—
Scharffs Oil and Bone Mills, Ltd	Tls. 50		Tls. 200,000	4,000	Tls. 50	Tls. 50	—	First year	—
Shanghai Ice Company, Limited	Tls. 13 sales		Tls. 200,000	8,000	Tls. 25		—	6% for 1907	Mar. 14, 1908
Shanghai Oil Co., Limited	Tls. 25		Tls 175,000	7,000	Tls. 25	Tls. 25	—	First year	—
Campbell, Moore & Co., Limited	$10 buyers		$12,000	1,200	$10	$10	$9,000	$3 for 1905	Apr. 2, 1906
Dunning & Company, Limited	$90 sellers		$100,000	2,000	$50	$50	—	$5 year ending 28.2.08	Apr. 15, 1908
J. Llewellyn & Co, Limited	$50 buyers		$72,000	1,200	$60	$60	—	7.20 for 1908	Apr. 1, 1909
Lane, Crawford & Company	$137½ sales		$250,000	2,500	$100	$100	—	Final of 3% making 6% for 1908	June 8, 1909
Moudon (E. L.) Limited	Tls. 6 buyers	187½	Tls. 225,000	9,000	Tls. 25	Tls. 25	none	—	—
S. Montrie & Company, Limited	$48 sellers		$250,000	5,000	$50	$50	—	$4 for year ended March 31, 1908	June 16, 1908
Weeks & Company, Limited	$26½ buyers		$400,000	20,000	$20	$20	$40,000	Final of $1.20 making $2 for 1908	May 20, 1909
Dominion Rubber Co., Limited	Tls. 4		Tls. 225,000	22,500	Tls. 10	Tls. 4	—	First year	—
Kalumpong Rubber Co., Ltd	Tls. 42 sellers		Tls. 700,000	14,000	Tls. 50	Tls. 50	** Tls. 11,844.48	6% for 1907	Nov. 29, 1908
Senawang Rucber Estates Company, Limited	Tls. 100		Tls. 250,000	2,500	Tls. 100	Tls. 100	—	—	—
Senawang Rubber Estates Company, New	Tls. 75				Tls. 100	Tls. 75			
Tebong Rubber and Tapioca Estate, Limited	20s.		£76,000	76,000	£1	£1	—	—	—
Eastern Fibre Co., Limited	Tls. 10 nominal		Tls. 300,000	30,000	Tls. 10	Tls. 10	—	1¡ ex. 2/6=Tls. 0.40 for 1908	August 5, 1909
Shanghai Mercury, Limited	Tls. 50 buyers		Tls. 105,500	2,100	Tls. 50	Tls. 50	—	Final of 6% making 10% for year ended 30.4.08	June 29, 1908
Shanghai Mutual Telephone Co., Limited	Tls. 62 buyers		Tls. 675,000	13,500	Tls. 50	Tls. 50	—	Tls. 3 for 1907	June 28, 1908
China Export, Import & Lumber Company, Limited	Tls. 78 nominal		Tls. 350,000	500	Tls. 100	Tls. 50	—	10 p. c. for year ending 29.2.08	May 1, 1908
China Printing Co, Limited	Tls. 42½		Tls. 750,000	1,500	Tls. 50	Tls. 50	—	7% 1908	Apr. 18, 1909
Dallas Horse Repository Co., Ltd	Tls. 25 nominal		Tls. 250,000	5,000	Tls. 50	Tls. 50	—	—	—
Hirano Mineral Water Co., Ltd.	Y. 15 sales		Y. 125,000	5,000	Y. 25	Y. 25	—	10%=yen 2½ for year ending 30th Sept. 08 Y. 1.20 for year ended Feb. 29	Apr. 26, 1909
E. E. Porter & Co., Limited	$50		$100,000	2,000	$50	$50	—	$6 for 1907	Apr. 22, 1908
Shanghai Electric & Asbestos Company, Limited	$20 sales		$125,000	5,000	$25	$25	—	8% for year ended Feb. 28, 09	June 21, 1909
Shanghai Electric Construction Company, Limited	£11 buyers	£11	£300,000	30,000	£10	£10	—	First year	—

DEBENTURES

LOANS		PRICE—PLUS ACCRUED INTEREST	AMOUNT OF LOAN	OUTSTANDING	NOMINAL VALUE	RATE OF INTEREST	WHEN PAYABLE
Shanghai Municipal Debentures	1892	Tls. 92½	Tls. 50,000	Tls. 45,400	Tls. 100	5 %	June & Dec.
do	1893	,, 96	,, 125,000	" 32,000	" 100	5½ ,,	Do
do	1894	,, 104½	,, 105,000	" 60,000	" 100	6 ,,	Do
do	1895	,, 92½	,, 115,000	" 32,600	" 100	5 ,,	Do
do	1896	,, 92½	,, 140,000	" 131,800	" 100	5 ,,	Do
do	1897	,, 92½	,, 268,800	" 268,400	" 100	5 ,,	Do
do	1898	,, 104½	,, 300 000	" 60,000	" 100	6 ,,	Do
do	1900	,, 96	,, 33,900	" 31,700	" 100	5½ ,,	Do
do	1901	,, 104½	,, 250,000	" 200,000	" 100	6 ,,	Do
do	1902	,, 104½	,, 150,000	" 150,000	" 100	6 ,,	Do
do	1903	,, 101½	,, 490 500	" 490.500	" 100	6 ,,	Do
do	1904	,, 104½	,, 214,500	" 214.500	" 100	6 ,,	Do
do	1905	,, 104½	,, 320 000	" 320,000	" 100	6 ,,	Do
do	1907	,, 104½	,, 250.000	" 250,000	" 100	6 ,,	Do
Chinese Imperial Government Loan	1886 E	,, 250	,, 767,200	" 351,400	" 250	7 ,,	Mar. & Sept
Shanghai Land Investment Co., Debentures	1890	,, 102	,, 250.000	" 250,000	" 100	6 ,,	May & Nov.
do	1892	,, 96	,, 250.000	" 250.000	" 100	5½ ,,	June & Dec.
do	1894	,, 101	,, 250,000	" 250.000	" 100	6 ,,	Mar. & Sept.
do	1896	,, 92½	,, 250.000	" 250,000	" 100	5 ,,	June & Dec.
do	1900	,, 102	,, 250.000	" 250,000	" 100	6 ,,	April & Oct.
do	1901	,, 102	,, 250.000	" 250.000	" 100	6 ,,	June & Dec.
do	1901	,, 96	,, 100 000	" 100.000	" 100	5 ,,	May & Nov.
do	1902	,, 102	,, 400.000	" 400,000	" 100	6 ,,	June & Dec
do	1905	,, 102	,, 250.000	" 250.000	" 100	6 ,,	Do
Shanghai Waterworks Co., Debentures	1894	,, 103	,, 100,000	" 100,000	" 100	6 ,,	Mar. & Sept
do	1896	,, 92½	,, 100,000	" 100,000	" 100	5 ,,	June & Dec.
do	1899	,, 103	,, 50.000	" 50,000	" 100	6 ,,	Do
do	1900	,, 103	,, 100.000	" 100,000	" 100	6 ,,	Mar. & Sept.
do	1902	,, 103	,, 100.000	" 100.000	" 100	6 ,,	Do
do	1903	,, 103	,, 100 000	" 100 000	" 100	6 ,,	June & Dec
Perak Sugar Cultivation Co., Debentures	1902	,, 101	,, 200,000	" 200.000	" 100	7 ,,	April & Oct.
Shanghai Gas Co., Debentures	1897	,, 92½	,, 100.000	" 100,000	" 100	5 ,,	Do
do	1899	,, 102	,, 1,000,000	" 100,000	" 100	6 ,,	May & Nov
do	1900	,, 102	,, 2,000,000	" 200.0 0	" 100	6 ,,	June & Dec
Shanghai and Hongkew Wharf Co., Debentures	1902	,, 100½	,, 799.800	" 799,800	" 100	6 ,,	Do
Astor House Co., Debentures	1905	,, 103	,, 500,000	" 500.000	" 100	7 ,,	Do
British Municipal Council, Hankow	1901	Sh. ,, 105	H'kow Tls 100.000	H'kow Tls 100 000	" 100	7 ,,	June & Dec.
Shanghai Club Debentures	1907	,, 96	Tls. 170,000	Tls. 170,000	" 100	6 ,,	Do
Country Club Debentures		,, 97	,, 139.000	" 139,000	" 100	6 ,,	Do
do	1907	,, 97	,, 92,000	" 92.000	" 100	6 ,,	Do
Lane Crawford & Co., Debentures	1907	,, 100	,, 110,000	" 110.000	" 100	7 ,,	Mar. & Sept.
Anglo-French Land Debentures	1908	,, 102½	,, 250,000	" 250,000	" 100	6 ,,	June & Dec.

SINGAPORE SHARE QUOTATIONS

(COURTESY MESSRS. FRASER & CO., BROKERS, SINGAPORE, NOVEMBER, 1909)

Date of Formation	Capital	Capital paid up	No. of Shares Issued	Issue Value	Paid up	Reserve	Last Dividend	Name	Buyers.	Sellers.
								MINING		
1903	$300,000	300,000	30,000	10	10	.....	12% for year ending 31-3-09	Belat Tin Mining Co., Ltd.	5.00	5.25
1907	$300,000	225,000	22,500*v*	10	10	.....	.....	Bruang Ltd.	4.75	5.00
1901	$600,000	600,000	60,000	10	10	25,000	10% for year ending 30-4-08	Bruseh Hydraulic Tin Mining Co., Ltd.	7.00	7.25
1903	£600,000	444,200	444,200*a*	1	1	.....	.....	Duff Development Co., Ltd.	6.90	7.00
1907	$400,000	375,000	37,500*b*	10	10	.....	.....	Kanaboi, Ltd.	1.20	1.30
1901	£60,000	60,000	60,000	1	1	.....	2/- interim for 1909	Kinta Tin Mines, Ltd.	12.00	12.25
1906	£100,000	100,000	100,000	1	1	.....	.....	Kledang Tin Mining Co., Ltd.	1.50	2.00
1905	$150,000	99,000	9,900*c*	10	10	6,485.68	35% for year ending 31-12-07	Kuantan Tin Mining Co., Ltd.	2.75	3.00
1908	£120,000	120,000	120,000	1	1	.....	.....	Lahat Mines Ltd.	10.00	10.25
1905	£30,000	30,000	30,000	1	1	.....	.....	Malaya and Siam Corporation, Ltd.	....	5/-
1906	$450,000	450,000	45,000	10	10	.....	.....	Malacca Tin Dredging Co., Ltd.	2.00	2.50
1906	£250,000	179,500	500,000*e*	5/-	5/-	.....	.....	Pahang Consolidated Co., Ltd.	6/-	6/6
1907	£100,000	80,000	80,000*f**	1	1	.....	.....	Pengkalen. Ltd.	6.15	6.25
1904	£100,000	80,000	80,000	1	1	.....	.....	Pusing Baharu Tin Mines, Ltd.	8.25	8.50
1904	£120,000	100,000	100,000*d*	1	1	6,000	45% for year ending 30-6-07	Pusing Lama Tin Mines, Ltd.	3.50	4.00
1907	$450,000	300,000	30,000*d**	10	10	.....	.....	Rahman Hydraulic Tin, Ltd.	7.50	7.75
1905	£27,000	27,000	27,000	1	1	.....	1/- interim during 1907	Rambutan, Ltd.	7.25	7.50
1902	£200,000	191,250	50,000	1	1	4,873	1/- paid January 1901	Raub Aust. Gold Ming. Co., Ltd.	5.00	5.50
			150,000	1	18/10	.....	1/- " " "	" " " *Contributory*	4.50	5.00
1905	£40,000	40,000	40,000	1	1	.....	.....	Redhills Tin Mining Co., Ltd.	2.00	2.50
1909	$110,000	110,000	22,000	5	5	.....	3% for year ending 22-1-09.	Royal Johore Tin Mining Co., Ltd.	1 25	1.50
1907	$550,000	500,000	50,000*e**	10	10	.....	.....	Salak South, Ltd.	4.50	4.75
1907	£80,000	80,000	80,000	1	1	.....	.....	Sempam Tin Mines. Ltd.	2.25	2.35
1906	$850,000	850,000	85,000	10	10	25,000	5% interim for 1909.	Serendah Hydraulic Tin Ming. Co., Ltd.	6.90	7.00
1899	$230,000	230,000	23,000	10	10	.....	3% for ¼ year ending 31-12-08.	Sipiau Tin Co., Ltd.	2.00	2. 5
1900	$200,000	$150,000	15,000	10	10	.....	.....	Sungei Gau Tin Mining Co., Ltd.	....	3.50
1907	£90,000	70,000	70,000*w*	1	1	.....	1/6 interim for 1909	Tekka, Limited.	14 75	15 00
1906	£150,000	150,000	150,000	1	1	.....	1/- interim for 1909.	Tongkah Harbour Tin Dredging Co., Ltd.	14.50	15.00
1902	£160,000	160,000	160,000	1	1	.....	1/- interim for 1909.	Tronoh Mines, Ltd.	10.75	10.90
								RUBBER		
1909	£85,000	75,000	750,000	2/-	2/-	.....	.....	Allagar Rubber States, Ltd.	3/3	3/4½
1909	$120,000	105,000	105,000*d‡*	1	1	.....	.....	Alor Gajah Rubber Estate, Ltd.	1.25	1.30
1905	£150,000	150,000	1,500,000	2/-	2/-	.....	2½% interim during 1909	Anglo-Malay Rub. Co., Ltd.	1/1-	1/3
1905	$200,000	151,200	15,120*c**	10	10	7,400	20% interim for 1909.	Balgownie Rub. Estate, Ltd.	66.00	67.00
1904	£30,000	20,187 10/-	19,000	1	1	.....	10% for year ending 31-12-08	Batu Caves Rub. Co., Ltd.	5.10.0	5.13.6
			4,750*f*	1	5/-	.....				
1906	£80,000	70,000	70,000*s**	1	1	.....	5% for year ending 31-3-09.	Batu Tiga (Selangor) Rubber Co., Ltd.	2.1.0	2.2.0
1909	£100,000	66,135	57,816	1	1	.....	.....	Bukit Kajang Rubber Estates, Ltd.	1.19.0	2.0.0
			22,184*r**	1	7/6	.....	.....	" " " *Contributory*	1.2.6	1.4.0
1907	£30,000	22,500	18,000*h**	1	1	.....	.....	Bukit Lintang Rubber Estates, Ltd.	2.17 6	2.19.0
			6,000	1	15/-	.....	.....	" " " *Contributory*	2.8.0	2.10.0
1903	£70,000	66,700	66,700*x‡*	1	1	2,000	15% interim for 1909.	Bukit Rajah Rubber Co., Ltd.	8 6.0	8.9.0
1906	£35,000	30,000	30,000	1	1	.....	.....	Castlefield (K.) R Estate, Ltd.	2.10.0	2.12.0
1909	£60,000	62,500	12,500*t‡c*	10	5	.....	.....	Ceras Rubber Estates, Ltd.	6.50	7.00
1909	£225,000	175,000	1750,000*l*	2/-	2/-	.....	.....	Chersonese (F.M.S.) Estates, Ltd.	2/3	2/4½
			100,000	2/-	2/-	.....	25% interim for 1909.	Cicely Rubber Estates Co., Ltd.	1.1.6	1.1.6
1901	£16,000	16,000	60,000	2/-	2/-	.....	20½% interim for 1909.	" " " " 5% *Pref.*	1.5.6	1.7.0
1905	£75,000	62,997	62,997*i*	1	1	1,000	20% interim for 1909.	Consolidated Malay Rub. Estates, Ltd.	6.8.0	6.12.6
1906	£110,000	102,500	102,500*r**	1	1	.....	12% for year ending 31-12-08.	Damansara (Selangor) Rubber Co., Ltd.	3.19.0	4.0.0
1909	£15,000	49,000	40,000*z‡*	1	1	.....	.....	Edinburgh Rub. Estates, (Selangor) Ltd.	2.0.0	2.1.6
1909	$550,000	475,000	475,000*f‡*	1	1	.....	.....	Elphinstone Estates, Ltd.	1.80	1.75
1907	£80,000	70,000	70,000*g**	1	1	.....	.....	Golconda Rubber Co., Ltd.	2 17.0	2.18.0
1906	$680,000	680,000	40,000	17	17	.....	.....	Hevea Rubber Planting Co. Ltd.	16.50	17.00
1906	£310,000	305,000	305,000	1	1	8,784	7½% interim for 1909.	Highlands & Lowds. Para Rub. Co., Ltd.	3.5.0	3.7 6.
1904	£50,000	30,000	30,000	1	1	2,500	5% for year ending 30-6-09.	Inch Kenneth Rubber Estates, Ltd.	6.12.6	6.13.6
1909	£200,000	182,500	950,000*j*	2/-	1/-	.....	.....	Kam. (P.) R. & T. Co., Ltd. "A" Shares	4/6	4/9
			165,000	1	1	.....	.....	" " " "B" "	....	nom.
1905	£65,000	65,000	65,000*a‡*	1	1	.....	.....	Kapar Para Rubber Estates, Co., Ltd.	4.10.0	4.12.0
1906	£180,000	180,000	180,000*l*	1	1	.....	20% for year ending 30-6-09.	Kuala Lumpur Rubber Co., Ltd.	4.14.0	4.15.0
1907	£100,000	90,000	90,000	1	1	.....	7% for year ending 30-12-08.	Labu (F. M. S.) Rubber Co., Ltd. *Contrib.*	3.0.6	3.2.6
1907	£320,000	234,355	198,920	1	1	3,000	10% for year ending 31-12-08.	Lanadron Rubber Estates, Ltd.	3.17.6	4.2.6
			70,850	1	10/-	.....	.....	" " " *Contributory*	2.19.0	3.0.0
1906	*Gs* 135,000	135,000	580	250	250	.....	.....	Langen Rub. and Cocoanut Co., Ltd.	275.00	295.00
			60,000*o**	1	1	.....	.....	Ledbury Rubber Estates Ltd.	2.2 6	2.4.0
1908	£125,000	75,000	40,000*z*	1	7/6	.....	.....	" " " *Contributory*	1.5.0	1.6.6
			883,244	2/-	2/-	4,000	40% interim 1909.	Linggi Plantations Ltd., *Ordinary*	1.3.3	1.3.9
1895	£100,000	98,324 8/-	10,000	1	1	.....	7% for year ending 31-12-08	" " " *7% Pref.*	....	nom.
1907	£140,000	118,000	118,000	1	1	.....	3½% for year ending 31-12-08.	London Asiatic R. & Produce Co., Ltd.	2.11.0	2.15.0
			185,000	1	1	.....	7½% for year ending 31-12-07	Malacca Rubber Plants., Ltd. *Ordinary*	8.9.0	8.17.6
1906	£400,000	300,000	115,000	1	1	.....	.....	" " " *7½% Pref.*	8.9.0	8.17.6
1909	$400,000	400,000	80,000	5	5	.....	.....	Pajam Limited.	8.00	8.25
1903	£30,000	22,500	225,000	2/-	2/-	.....	25% interim during 1909	Pataling Rubber Estates Synd. Ltd.	1.3.6	1.4.0
1909	$500,000	450,000	45,000	10	10	.....	.....	Pegoh, Limited.	23.00	23.25
1905	£85,000	85,000	85,000	1	1	.....	10% for year ending 31-3-09	Perak Rubber Plantations, Ltd.	3.5 0	3.6.0
1906	$250,000	225,000	22,500	10	10	.....	.....	Ragalla Rubber Co., Ltd. *Ordinary*	27.50	28.00
		25,000	2,500	10	10	.....	.....	" " " 8% *Preference*	29.00	30.00
			15,000*l*	1	1	.....	.....	Rembia Rubber Estates Ltd. *Ordinary*	....	nom.
1909	£60,000	36,875	35,000	1	10/-	.....	.....	" " " 6% *Cum. Pref.*	13/3	14/-
1904	£20,000	18,752	20,000	1	1	.....	.....	Sagga Rubber Company, Limited.	4 15.0	4.17.6
1904	$100,000	100,000	1,000	100	100	20,000	30% interim for 1909	Sandycroft Rubber Co., Ltd.	775.00	800.00
			48,000	1	1	.....	.....	Seafield Rubber Co., Ltd.	3.7.6	3.9.0
1907	£100,000	80,400	48,000	1	13/6	.....	.....	" " " *Contributory*	2.17 6	3.0.0
1898	£30,000	30,000	300,000*x*	2/-	2/-	3,000	25% interim for 1909.	Selangor Rubber Co., Ltd.	1.15.0	1.15.6
1906	£65,000	65,000	65,000*y**	1	1	.....	3% for year ending 31-12-08	Shelford Rubber Estate, Ltd.	1.13.3	1.14.0
1909	£120,000	100,000	100,000*p**	1	1	.....	.....	Singapore Para Rubber Estates, Ltd.	1.12.0	1.12.6
1905	$500,000	500,000	5,000	100	100	.....	.....	Singapore Rubber Co., Ltd.	220 00	230.00
1903	$250,000	250,000	2,500	100	100	.....	.....	Singapore & Johore Rub. Co., Ltd.	310 00	320 00
1909	$250,000	60,000	10,000*x**	10	6	.....	.....	St. Helena Rubber Coy., Ltd.	13.50	14.00
1906	£175,000	175,000	175,000	1	1	.....	4½% for year ending 31-3-09.	Straits Settlements (B.) Rub. Co., Ltd.	1.13.0	1.13.6
			12,600	1	1	.....	.....	Sungei Choh Rub. Estate, Ltd. *Fully pd.*	2.0.0	2.1.0
1907	£45,000	40,500	32,400	1	17/6	.....	.....	" " " *Contributory*	1.15.6	1.16.0
			100,000*k**	1	1	.....	7½% interim for 1909	Sungei Kapar Rubber Co., Ltd.	3.15.0	3.16.0
1906	£110,000	100,000	55,000	1	1	.....	.....	Sungei Salak Rubber Co., Ltd.	2.0.6	2.1.6
1907	£70,000	55,000	50,000	1	1	.....	.....	Sungei Way (Selangor) Rub. Co., Ltd.	3.2.6	3.5.0
1904	£50,000	30,000	30,000	1	1	.....	.....	Tebrau (Johore) Rubber Co.	1.13.0	1.14.0
1908	£150,000	60,000	60,000	1	7/6	.....	.....	" " " *Contributory*	1.1.0	1.1.0
1909	$200,000	135,000	33,000*r**	5	5	.....	.....	Teluk Anson Rubber Estate, Ltd.	4 50	5.00
1907	£200,000	170,000	170,000*r**	1	1	.....	5% for year ending 31-8-08.	United Serdang (S.) R. Plantations, Ltd.	3.7.6	3.9.6
								United Singapore Rubber Estates, Ltd.	1.20	1.25
1909	$1,000,000	637,500	737,500*m*	1	-/50	.....	.....	" " " " "	....	nom.
1908	£65,000	65,000	650,000	2/-	2/-	.....	10% September, 1909	United Sumatra Rubber Estates, Ltd.	7/-	7/6
1904	£60,000	50,000	500,000*n*	3/-	2/-	.....	80% for year ending 31-3-09.	Vallambrosa Rubber Co., Ltd.	1.3.6	1.4.0
								GENERAL		
1907	$1,500,000	1,065,150	25,000*i**	10	10	.....	10% for year ending 31/12/08.	Eastern Smelting Co. Ltd.	....	10.00 n.
			116,450	10	7	.....	10% for year ending 31-12-08.	" " "	7.00	7.75
1898	$225,000	225,000	4,500	50	50	150,000	15% & 2½% bon. for yr. end. 31-12-08.	Fraser & Neave, Ltd.	146.00	147.50
1905	$2,400,000	2,400,000	18,000	100	....	75,000	2½% for year ending 31-10-08	Howarth Erskine, Ltd.	76.00	78.00
			6,000	100	....	.....	7% for year ending 31-10-08	" " 7% *Pref.*	95.00	97.50
1896	$1,000,000	1,000,000	6,000	100	100	600,000	10% for year ending 31-12-07	Katz Brothers, Ltd. *Deferred*	....	117.50
			4,000	100	100	.....	8% " " " " "	" " 8% *Cum. Pref.*	....	nom.
1901	$34,000	34,000	3,400	10	10	.....	20% for year ending 31-10-08	Maynard & Co., Ltd.	22.50	25.00
1899	$875,000	875,000	6,000	100	100	175,000	5% for year ending 31/12/08.	Riley, Hargreaves & Co., Ltd.	60 00	62.50
			2,750	100	100	.....	7% for year ending 31/12/08.	" " " " 7% *Pref.*	100.00	102.50
1903	$600,000	250,000	25,000*o*	10	10	.....	10% for year ending 30-6-09.	Singapore Cold Storage Co., Ltd.	11.75	12.00
1891	$30,000	30,000	600	50	50	23,000	10% for year ending 31-7-08	Singapore Dispensary Ltd.	55.00	57.50
1903	£400,000	400,000	400,000	1	1	.....	.....	Singapore Electric Tramways, Co., Ltd.	3/9	4/-
1884	$200,000	200,000	2,000	100	100	35,000	10% during 1907.	Straits Ice Co., Ltd.	....	130.00
1890	$500,000	498,000	4,980*c**	100	100	760,000*t*	5% interim for 1909.	Straits Steam Ship Co., Ltd.	190.00	192.50
1887	$3,000,000	3,000,000	300,000	10	10	130,000*u* 1,222,409	10% & 5% bon. for half yr. end. 31-3-09.	Straits Trading Co., Ltd.	53.50	53.75
								DEBENTURES		
								Howarth Erskine, Ltd. 6%.....$ 600,000	....	3% d.
								Riley, Hargreaves & Co., Ltd. 6%..£84,000	1%	3% p.
								Singapore Electric Tramways, Co., Ltd. 5%.....£350,000	....	....
								Singapore Municipal 15%.....1,873,000	3%	6% p.
								" " 4½% of 1907...1,000,000	3%	4½% p.
								" " 4½% of 1909...1,000,000	3%	5½% p.
								" " 4%.....602,900	6%	7% d.

a 152,500 unissued; 43,940 6% debenture
b 2,500 unissued
c 5,100 "
d 20,000 "
e 54,500 £1 Prefs. issued; 45,500 £1 " unissd. 100,000 5/- Ord. "
f 6,250 unissued
g 3,300 "
h 12,000 "
i 5,000 "
j £40,000 6% Debentures 22,000 unissued
k 75,000 unissued
l 94,000 "
m 35,000 "
n 20,000 "
o 175,000 unissued "A" shares
p Sundry Reserves.
q
r 7,500 unissued
s 20,000 "
t 2,263 9/- paid shares
u 50,220 unissued
*v** 16,756 "
*c** 4,880 "
*d** 15,000 "
*e** 20 "
*f** 20,000 "
*g** 221 7½% Debentures
*h** 10,000 unissued
*i** 8,550 "
*k** 6,000 "
*l** 5,000 "
*m** 25,000 "
*o** 10,000 "
*p** 4,000 "
*q** 30,000 "
*r** 7,500 "
*s** £10,000 Convertible 6% Debentures issued
*t** 10,000 do unissued
*n** 5,000 "
*w** 20,000 "
*x** 15,000 "
*y** 7,000 "
e‡ 20,000 "
b‡ 5,000 "
d‡ 500,000 "
a‡ 15,000 "
*z** 75,000 "
*u** 15,000 "
c‡ 100,000 "
u 262,500 "
f‡ 10,000 "

YOKOHAMA SHARE QUOTATIONS

COURTESY A. C. HUTTON POTTS, SHARE AND GENERAL BROKER, YOKOHAMA, OCTOBER, 1909.

STOCKS.	CAPITAL.	NO. OF SHARES.	ISSUE VALUE.	AMOUNT PAID UP.	RESERVE FUND.	AT WORKING ACCOUNT OR CARRIED FORWARD.	DATE.	LAST DIVIDEND.	FOR TERM.	CLOSING QUOTATION.
Brett & Co., Ltd.	-Y- 28,000	2,800	-Y- 10	-Y- 10			31-12-08	12½%	for 1 year	10 Sales.
Club Hotel, Ltd.	185,000	1,850	100	100	3,000	-Y- 768.96	31-3-08	7%	for 1 year	70 Nominal.
Grand Hotel, Ltd.	500,000	5,000	100	100	10,000		30-6-09	4%	for ½ year	100 Sellers
Helm Bros., Ltd.	186,000	3,720	50	50	25,000	-Y- 6,365.55	31-12-08	17½%	for 1 year	80 Sales,
Langfeldt & Co., Ltd.	100,000	2,000	50	50	10,000	6,296.63	30-6-09	5%	for ½ year	45 Sellers.
C. Nickel & Co., Ltd. †	500,000	20,000	25	25		1,782.10	31-10-08	20%	for 1 year	45 Buyers
Yokohama Engine and Iron Works *	500,000	10,000	50	50	50,000	-Y- 29,421.19	31-5-08	10%	for 1 year	70 Sales
Oriental Hotel, Ltd., Ordinary	250,000	3,000	50	50	306,090.49		31-8-07	12%	for 1 year	50 Nominal.
Oriental Hotel, Ltd., Preference		2,000	50	50				8%	for 1 year	50 Nominal.
The Union Estate and Investment Co., Ltd. ‡	1,000,000	10,000	100	100	6,000.00	1,753.03	30-9-08	7%	for 1 year	100 Nominal.

† 285,000 unissued.
‡ 475,000 unissued.
*-Y- 390,000 issued.
110,000 unissued.

DEBENTURE LOANS.	AMOUNT OF LOAN.	FACE VALUE OF DEBENTURES.	RATE OF INTEREST.	INTEREST PAYABLE.	CLOSING QUOTATION.
Brett & Company, Limited.	11,500.00	100.00	7%	1 June and 1 Dec.	95 Sales.
Yokohama United Club.	250,000.00	100.00	7%	30 June and 31 Dec.	100 Sales.
C. Nickel & Company, Limited.	50,000.00	100.00	8%	1 May and 1 Nov.	110 Sellers.
Oriental Hotel, Limited.	250,000.00	100.00	8%	1 April and 1 Oct.	101 Sellers.
Union Estate and Investment Co., Limited.	250,000.00	100.00	6%	30 June and 31 Dec.	95 Sellers.

JAPANESE STOCKS.	FACE VALUE.	AMOUNT PAID UP.	LAST DIVIDEND.	DIVIDEND PAYABLE.	CLOSING QUOTATION.
Bonds & Debentures.					
Exchequer Bonds 2nd issue	-Y-100	-Y-100	5%	March and Sept.	-Y-100.00
Exchequer Bonds 3rd issue	100	100	5%	March and Sept.	„ 100.00
Consolidated Bonds (Seiri)	100	100	5%	June and Dec.	„ 98.60
War Bonds (Gunji)	100	100	5%	June and Dec.	„ 98.60
Imperial 5% Bonds	100	100	5%	March and Sept.	„ 97.50
Special 5% Bonds (issued 1906)	100	100	5%	June and Dec.	„ 98.60
Yokohama Water Works Bonds	100	100	6%	June and Dec.	„ 103.00
Yokohama City Public Loan Bonds	100	100	6%	March and Sept.	„ 102.00
Osaka City Harbour Construction Bonds	100	100	6%	June and Dec.	„ 103.00
Osaka City Public Loan Bonds	100	100	6%	June and Dec.	„ 103.00
Kawasaki Dock Yards Co.'s Debentures	100	100	7%	June and Dec.	„ 104.00
Tokyo Race Associations	500	500	30%	June and Dec.	„ 110.00
Railways & Electric Trams.					
Tokyo Railway Company, Limited	50	50	5 2|5%	June and Dec.	„ 69.30
Yokohama Electric Tramway Company, Limited	50	50	6%	July and Jan.	„ 50.95
Keihin Electric Tramway Company, Limited	50	50	6%	June and Dec.	„ 56.80
Southern Manchurian Railway Co., Ltd.	100	20	6%	June and Dec.	„ 38.00
Hanshin Electric Tramway Co., Ltd.	50	50	12%	May and Nov.	„ 121.00
Cotton Spinnings.					
Kanegafuchi Cotton Spinning Company, Limited	50	50	14%	July and Jan.	„ 105.70
Fuji Gassed-yarn Company, Limited	50	50	14%	July and Jan.	„ 99.15
Tokyo Cotton Spinning Company, Limited	50	50	5%	July and Jan.	„ 44.85
Imperial Hemp Weaving Company, Limited	50	50	12%	July and Jan.	„ 70.75
Nisshin Boseki Kabushiki Kaisha	50	12½	5%	——	„ 13.85
Sugar & Beer Cos.					
Dai-nippon Sugar Refinery Company, Limited	50	50	——	May and Nov.	„ 16.00
Ensuiko Sugar Refinery Company, Limited	50	20	20%	June and Dec.	„ 40.20
Dai-nippon Beer Company, Limited	50	50	12%	July and Jan.	„ 79.60
Kirin Brewery Company, Limited	50	50	6%	July and Jan.	„ 40.50
Docks & Steamships.					
Yokohama Dock Company, Limited	50	33	12%	June and Dec.	„ 57.00
Uraga Dock Company, Limited	50	50	——	July and Jan.	„ 10.00
Kawasaki Dockyard Company, Limited	50	50	12½%	Feb. and Aug.	„ 54.00
Nippon Yusen Kaisha	50	50	10%	May and Nov.	„ 81.00
Hokkaido Tanko S. S. Company, Limited	50	50	14%	July and Jan.	„ 34.20
Miscellaneous.					
Tokyo Electric Light Company, Limited	50	50	12%	June and Dec.	„ 94.75
Tokyo Gas Company, Limited	50	50	13%	July and Jan.	„ 101.30
Yokohama Union Electric Light Company, Limited	50	50	14%	June and Dec.	„ 93.50
Fuji Paper Mills	50	50	6%	June and Dec.	„ 34.00
Otaru Timber Company, Limited	50	50	——	March and Sept.	„ 8.00
Hoden Petroleum Company, Limited	50	50	20%	April and Oct.	„ 72.00
Tokyo Rope Manufacturing Company, Limited	50	50	18%	June and Dec.	„ 101.50
Japan Horse Improvement Company, Limited	50	50	15%	March and Sept.	„ 6.00
Tokyo Stock Exchange Company	50	50	15 1|5%	June and Dec.	„ 163.95
Osaka Electric Light Company, Limited	50	50	16%	July and Jan.	„ 131.00
Kobe Electric Light Company, Limited	50	50	14%	July and Jan.	„ 104.00

BNGKOK SHARE QUOTATIONS

(COURTESY MESSRS. EDWARDS & CO., BANGKOK, SIAM.)

NAME.	BUYERS.	SELLERS.	LAST SALES.	ESTABLISHED.	CAPITAL.	NO. OF SHARES.	ISSUE VALUE.	AMOUNT PAID UP.	RESERVE FUND	LAST DIVIDEND.
Siam Electricity Co., Ltd.	Tcs. 380	Tcs. 390	Tcs. 380	1901	£ 300,000	30,000	£ 10—	£ 300,000	Tcs. 491,338	12% Tcs. 4 bon.
Paknam Railway Co., Ltd.	„ 200	„ —	„ 220	1903	Tcs. 400,000	5,000	Tcs. 80	Tcs. 400,000	„ 17,566	8%
Siam Tramway Co., Ltd.	„ —	„ —	„ 140	1905	„ 1,450,000	6250 Shares 7250 Deb. 1000 P. Shares	„ 100	„ 2,230,000	„ 1,875	—
Meklong Railway Co., Ltd.	„ —	„ 106	„ 105	1907	„ 2,230,000	22,300	„ 100	„ 223,000	„ 23,000	5%
Bangkok Manufact. Co., Ltd.	„ —	„ —	„ 182	1908	„ 400,000	4,000	„ 100	„ 400,000	„ 60,000	7% per for 6
Bangkok Dock Co., Ltd.	„ —	„ 135	„ 135	1865	„ 1,000,000	10,000	„ 100	„ 950,000	„ 220,000	months
Siam Steam Packet Co.	„ —	„ 57	Par	1898	„ 150,000	3,000	„ 50	„ 150,000	„ 34,000	5%
Siam Commercial Bank	„ 1,050	„ —	Par	1906	„ 3,000,000	3,000	„ 1,000	„ 3,000,000	„ 338,850	8%
Menam Motor Boat Co.	„ —	„ 100	„ 100	1905	„ 200,000	2,000	„ 100	„ 200,000	—	6%
Transport Co., Motor	„ —	„ 90	„ 100	1906	„ 200,000	2,000	„ 100	„ 200,000	—	—
Jenderata Rubber Co.*	„ —	„ £8.—	„ 90 (for six calls)	1906	£ 40,000	4,000	£ 10	£7.-paid	—	—
Bagan Rubber Co.	„ —	„ —	„ —	1907	Tcs. 300,000	3,000	Tcs. 100	Tcs. 40 per share	—	—
Siam Steam Navigation Co., Ltd.	„ —	„ —	„ —	1909	„ 2,000,000	10,000	„ 200	—	„ 10,000	—
Siam Stone Works, Ltd.	„ —	„ 90	„ 100	1909	„ 350,000	3,500	„ 100	„ 350,000	—	6% half year
Kombok Rubber Co.	„ —	„ —	„ 19	1906	$ 300,000	30,000	$ 100	$7, per Share	—	—

PHILIPPINE SHARE REPORT

JUNE 1ST, 1909

NAME	WHEN INCORPORATED	AUTHORIZED CAPITAL	ISSUE VALUE OF SHARE	NO. OF SHARES	SUBSCRIBED	PAID UP	RESERVE	WORKING %	DATE	LAST DIVIDEND	CLOSING QUOTATIONS
American Drug Store	1908	₱ 100,000	₱1,000	100	40	₱1,000	.....	₱5,000	Jan. 4, 1909..	.....	No Sellers.
*Banco Español Filipino	1851	3,000,000	200	15,000	8,439	200	₱225,000	.....	.....	7% for year 1908....	190 nom.
Benguet Consolidated Mining Co....	1903	2,000,000	2	1,000,000	495,000	2	.....	38,000	Feb. 2, 1909..	.....	No Sellers.
Benguet Commercial Co., Ltd.....	1908	200,000	10	20,000	7,360	10	.....	.....	.....	7% for year 1907	₱10.
Cadwallader-Gibson Lumber Co....	1908	1,000,000	100	10,000	8,650	100	.....	.....	.....	.....	No Sellers.
*Camote-Clayton Mining Co.....	1909	400,000	10	40,000	20,000	10	.....	.....	.....	.....	₱10.
*Compania Maritima.....	.....	1,018,000	200	5,090	5,090	200	.....	.....	.....	.....	₱40 buyers
*El Varadero de Manila.....	.....	350,000	100	3,500	3,500	100	.....	.....	.....	.....	Sellers 70
Electrical Supply Co., Inc.....	1909	100,000	100	1,000	500	72	.....	.....	.....	.....	No sellers
Export & Import Lumber Co.....	.....	200,000	200	1,000	1,000	200	.....	.....	.....	.....	No sellers.
*Fabrica de Hielo de Manila.....	.....	350,000	50	7,000	7,000	50	.....	.....	.....	18% for year 1908...	₱80 sellers
*Germinal Cigar Factory.....	.....	500,000	500	1,000	1,000	500	₱285,000	.....	.....	6% for year 1908 and 6% on capital.....	750 sellers
H. E. Heacock Co.....	1909	100,000	100	1,000	800	100	.....	.....	.....	First year.....	No sellers.
*Headquarters Mining Co. (Inc.)...	1908	600,000	10	60,000	35,000	10	.....	.....	.....	.....	₱10.
Insular Lumber Co.....	1907	2,000,000	200	10,000	9,000	200	.....	.....	.....	.....	No sellers.
Juan Seiboth Co., Ltd.....	1908	150,000	20	7,500	500	20	.....	.....	.....	First year.....	.....
*La Concha Button Factory.....	.....	75,000	100	750	750	100	.....	.....	.....	10% for year 1908...	₱110 sellers.
Lambert, Springer Co.....	1908	200,000	1,000	200	80	1,000	.....	.....	.....	.....	No sellers.
Luzon Stevedoring Co.....	1909	250,000	25	10,000	4,200	25	.....	.....	Sept. 15, 1909	15%.....	No Sellers.
Mindanao Herald Publishing Co...	1907	15.000	100	150	75	100	.....	.....	Dec. 31, 1908.	½ of 1% interim for 1908	No sellers.
Newspaper Publishing Co.....	1907	400,000	100	4,000	3,740	100	.....	.....	.....	.....	.....
Walter E. Olsen Co., Inc.....	1909	500.000	100	5,000	2,033	100	.....	.....	.....	First year.....	No sellers.
Paracale Gold Dredging Co.....	1907	£10,000	£1	10,000	9,000	£1	.....	.....	.....	.....	£1.10 s.
Palomar Park Amusement Co.....	1908	300,000	.....	300,000	60,312	.50	.....	.....	.....	.....	₱1.
Phil. Hemp Machine Co., Ltd.....	1907	1,000,000	100	10,000	8,500	100	.....	.....	.....	.....	₱100
Philippine Publishing Co.....	1907	600,000	200	3,000	2,181	200	.....	.....	Mar. 1st, 1909	₱3 a share for 1908..	₱50
Port Banga Lumber Co.....	1908	100,000	100	1,000	934	100	None.	40,000	First Saturday in January..	None.....	No sellers.
The Philippine Gold Dredging Co...	1907	200,000	10	20,000	20,000	10	.....	.....	.....	.....	No sellers.
*Philippine Co., Ltd.....	.....	750,000	10	7,500	7,500	10	.....	.....	.....	.....	₱5 buyers.
Philippine Rosin & Turpentine Co..	.....	150,000	1	150,000	70,000	1	.....	.....	.....	First year.....	.....
Philippine Exploration Co.....	1908	2,000,000	10	200,000	90,000	10	.....	.....	.....	.....	No sellers.
The Rosenstock Pub. Co.....	1908	75,000	10	7,500	6,000	10	.....	.....	.....	.....	No sellers.
*San Nicolas Iron Works.....	.....	300,000	500	600	600	500	.....	.....	.....	.....	₱200 sellers.
San Mauricio Gold Mining Co.....	1908	4,000,000	200	20,000	.....	.....	.....	.....	.....	First year.....	No sellers.
Tarlac Railway Co.....	1906	150,000	100	1,500	1,500	100	.....	₱9,674.75	June 30, 1908.	.....	No sellers.
Union Hemp Machine Co.....	1909	50,000	10	5,000	2,600	10	.....	.....	.....	.....	No sellers
Zamboanga Cold Storage Co.....	1903	40,000	100	400	200	100	₱8,500	.....	May 1st, 1909.	20%.....	₱120.

* John T. Macleod's share list.

PHILIPPINE BONDS

	DATED	AUTHORIZED	ISSUED	OUTSTANDING	PAR VALUE	RATE OF INT.	WHEN PAYABLE	LAST QUOTATION
Philippine Friar Land Bonds	Feb. 1st, 1904	$7,000,000	$7,000,000	$7,000,000	$ 100	4%	Feb. 1, 1914	104½
Public Works and Permanent Improvement Bonds	March 1, 1905	$5,000,000	$2,500,000	$2,500,000	$ 100	4%	March 1, 1915	104½
Do.	Feb. 1, 1906	.....	$1,000,000	$1,000,000	$ 100	4%	Feb. 1, 1916	104½
Manila Sewer and Water Works Improvement Bonds	June 1, 1905	$4,000,000	$1,000,000	$1,000,000	$ 100	4%	June 1, 1915	104½
Do.	Jan. 2, 1907	.....	$2,000,000	$2,000,000	$ 100	4%	Jan. 2, 1917	104½
Philippine Railway First Mortgage Fourt per cent Thirty Year Sinking Fund Gold Bonds	July 1, 1907	$15,000,000	$5,736,000	$5,736,000	$1000	4%	July 1, 1937	97

*Payment of interest guaranteed until maturity or redemption by the Philippine Government.

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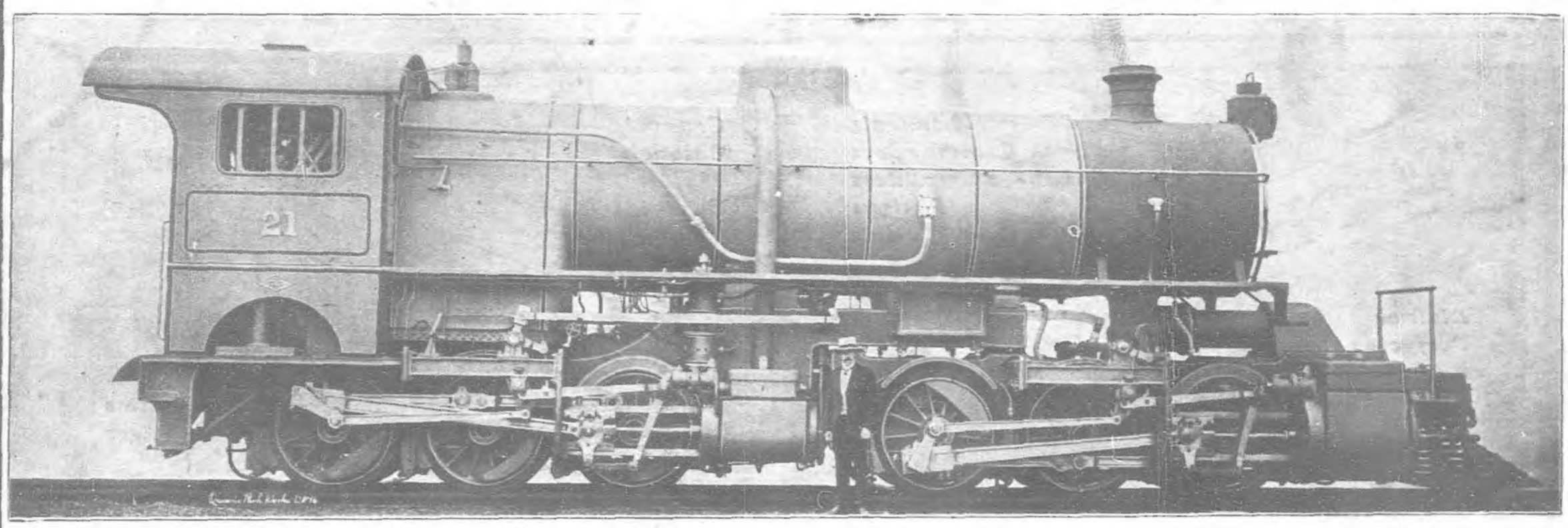
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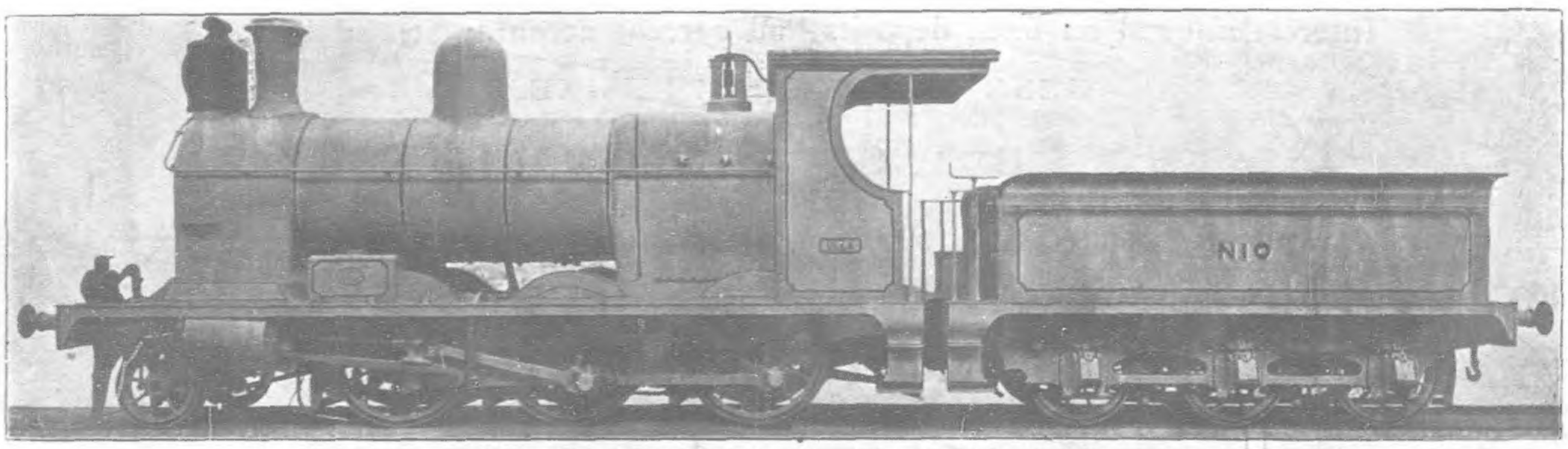
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